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...it will do all that is required. But that will
...be the case. ...valuable, when sown among
...as a top dress- ...nitro

Plaster is exceedingly valuable, when sown among wheat or peas, or beans, or clover, as a top dressing. It takes into combination with it the nitrogen of the air, and absorbs the ammonia of the falling rain.

to meet the wants of the manure heap, I think that sulphuric acid (oil of vitriol) directly applied with water, will be found much cheaper and more valuable.

Mix with ten gallons of water one pint of the acid, and saturate the manure heap with it, providing of course, according to the size of the heap and its disposition to heat. The sulphuric acid, with the ammonia will form sulphate of ammonia, and both of these properties enter into the composition of our most valuable plants or products of the soil.

The cost of a few gallons of sulphuric acid for such a purpose would be money at a very large per cent. interest. But let it be handled cautiously, by the inexperienced, lest injuries be the consequence of carelessness. Put the water into a wooden vessel, and then put the acid to it. The acid is nothing lost, in this application. The acid enters into the plants, if applied to the manure.

There is nothing lost, in the
sulphuric acid would enter into the plants,
plied to the soil separate from the manure. The most valuable
properties of the manure heap are kept from
c.

M. H. Dec. 10, 1851.

Mason, N. H., Dec. 10, 1851.

THE HORSE

THE HORSE.
Because the farmer is located upon his own land, and finds plenty of employment there, it is no reason why he should not look out occasionally from the "loop hole of his retreat" upon the wide world, and himself add something to its pleasures and also gain by its teachings. Nor must we forget to notice how the world wags around us, because we are an agricultural editor, and "find it in the bond" that we must discuss cattle and cucumbers, pigs and potatoes, plows, pumpkins and pumpkins.

"No post up Union contracts our powers,
"The whole boundless world is ours,"
"No post up Union contracts our powers,
"The whole boundless world is ours,"

"No post up Union contrasts our powers,
But the whole business world is ours."

and we shall appropriate such portion of it as will
seem to us to be acceptable to the reader in what
we deem it may chance to be.

find a lecture delivered at Man-
Serra, of Bo-

Here, then, we find a lecture delivered at Manchester, N. H., by Dr. J. V. C. Smith, of Boston, a gentleman who has visited a goodly portion of the world, and has a pleasant way of imparting information.

U.S. what has all this to do with the horse?
 into the reader. Why, surely this, that Doctor
 lands named Palestine, or the Holy Land, a spot
 with interesting associations for us all.
 the owners spoke of the Horses there.

... of a dapple grey color. Had
... their caravansaries were rather
... in had shops in them—barns
... in a dappled straw and beam
... of the house to a field—the straw

was used for the purpose of ————, whilst the beans was a highly concentrated nutrition, which alone, would so contract the bowels of the animal as to produce disease—hence the great value of a combination of the straw with the beans.

He thought the same principle of feeding might be practised in this country, and that successfully, both in a physiological and pecuniary view."

THE FLOW.

extended to ever

THE FLOW.

THE FLOW.

The Doctor's observation extended to every thing that was to be seen. From the following extract we suspect he has something of an agricultural turn, with all his other gifts. He observes,

...cultivated here under a very same instrument ag

"The land was cultivated here under a very great disadvantage—using the same instruments now, that were used two thousand years ago. Here they saw a great tomb cut out of solid stone; on either side of the spacious entrance niches were cut in, and the whole workmanship within evinced great skill and experience. This tomb was built 4000 years ago. Herodotus visited it two thousand years ago, and speaks of it as having been then wrought a splendid figure of a young girl dancing; also the plow was there, a fac simile of the plow used by the inhabitants now. These people are very tenacious in their habits. They are very remarkable at horsemanship—train their horses to perform wonders—ride with great speed over rocky crags, and among rolling pebbles. It would, in his opinion, be a hopeless task for an army of 100,000 men to conquer 500 of the meandering horsemen."

A HORN.

A HORN-

A HORN.

It must be interesting to all to observe through what an immense period a single custom will be preserved; simple, yet pregnant with meaning to those who observe it. It is supposed that a portion of the Psalms was written as remotely as the time of Moses. If so, that portion must have been composed over *three thousand* years ago. In the 92d Psalm, the writer says:—"But my horn shalt thou exalt like the *horn* of an unicorn;" and in the 148th, "He also exalteth the *horn* of his people, the praise of all his saints." The term frequently occurs in Scripture as a symbol of power and exaltation, as Hannah's declaration in 1st of Samuel, chap. 2, verse 1, "Mine *horn* is exalted in the Lord," and the prophet Zedekiah "made him horns of iron," and told Ahab that with them he should smother the Assyrians, until he had consumed them. Bruce, the celebrated African traveller, states that the Abyssinian chiefs and governors of provinces wear them. They are made of different forms and substances; and sometimes, as Dr. Smith says, the cow's horn itself. It is a custom with us on the heels of friends to "wear mourning" and a downcast demeanor; so that the erection of the "*horn*" is gladness, or depressing it is sorrow, as it may seem. The horn was attached to a broad fillet passing round the forehead and tied behind, from the centre of which it projected, and could be raised or lowered at pleasure.

The investigations of modern travellers have explained a great number of allusions and intricate passages of Scripture, which have heretofore remained almost a dead letter to a large majority of readers. But let us see what the Doctor says about "the horn."

"All married women here, wear a *horn*, sometimes a cow's horn from ten to twenty inches long. They also go veiled. David, the Psalmist, spoke of this horn. The position of this singular ornament indicated the feelings of its fair possessor. If, happily, no sorrow mars her peaceful cot, the horn will be erect; but, if sorrow dwell in her habitation, it will be seen to drop down.

He witnessed a marriage ceremony among this peculiar people, and in the procession noticed only one horn, perhaps the mother of the bride. The bride was escorted by a large number of young ladies singing plaintive airs. All the women cover their faces in that country. It would be the height of immodesty for one to go with her face uncovered in the open street. Rebecca of old, when being sought in marriage, took her veil."

THE FIRST EAR OF CORN.

You are probably aware that corn (Indian corn) is unknown in Paris. It is neither known as green corn, nor as sweet corn, nor as pop corn; as corn in the kernal, or corn on the ear. It is rarely seen, even when ground into Indian meal. I speak of Paris and the neighborhood only; for I believe that it is cultivated in the South of France, to a limited extent, under the name of *mais*. I was, some weeks ago, at a dinner party, given by an American gentleman, at his chateau, in a suburb of Paris. Upon the table were green corn and sweet potatoes, results of perhaps the only efforts ever made to acclimate them here. As the corn was passed around, you might have distinguished the Americans from the French, by noticing who accepted and who declined. The former were eager to renew an acquaintance long since interrupted, while the latter fought shy and kept the waiters at bay. It fell to my lot, however, to initiate into the mysteries of this novel vegetable a young French lady at my right hand. To her, the ear upon her plate was a revelation. Its shape was anomalous, its odor singular, and, moreover, the manner of eating it was barbarous. Before attempting its demolition, many an unanswered inquiry passed through her bewildered little brain. Was the outside a mere rind, inclosing the pulp in the interior? Or was it nutriment to the core, and succulence to the centre? Did it have a stone? Did it intoxicate like the magney? Would the juice start forth, as from a ripe tomato, at the first immersion of the teeth? Might it not be poisonous, like the nightshade or the toadstool? By this time, her ear was ready, buttered, salted, and each now slit through the centre. I flatter myself that the utter failure of the experiment can in no way be attributed to want of skill here. My pupil ate about half a double row, and then retired from the field, content with the laurels she had won, but perplexed by the cob, and sorely teased by the tissue-like-skin in which kernels were involved. The next day she was taken sick, and was compelled to keep her room. Anxious to prove to her that however lightly she might treat the offending vegetable, it was made, in former times, the subject of thanks-

giving to whole races and nations, I sent her an engraving from Mr. Catlin's frightful picture of a 'Chippewa Dance to thank the Great Spirit for Green Corn.' She thought that to a Spirit, that favored the growth and presided over the harvesting of such a product, just such a demonstration would be acceptable. The demoniacal orgies in which those Chippewas were indulging, could not be more fittingly introduced than at a Green Corn Festival."—*Paris correspondent N. Y. Tribune.*

PEARS RUNNING OUT.

Any person conversant with fruit, who will take the trouble to walk through the markets of Philadelphia, where more Seckel pears are to be seen than anywhere else in the world, cannot but be struck with the very small size of these pears. If he has besides been in the habit, as we have been, of seeing the Philadelphia markets at this season, for some years past, he will make the comparison between the Seckel pears of Philadelphia now, and those of ten or fifteen years ago. Then, the Seckel pears might be seen by the wagon load, large, fair, ruddy, and handsome, as well as delicious. If you mention this present degeneracy to a Philadelphian, he will shrug his shoulders, and say, "yes, the Seckel pear is no longer what it once was: I am afraid it is running out."

And yet, if you go to Boston, which is far from being so favorable a climate for fruit culture as that of Philadelphia, you will see Seckel pears so large and fine that you almost doubt their being the same fruit. If you are curious to investigate the history of the Seckel pear culture in the two places, you will not long be at a loss how to account for the difference. In Philadelphia, they trust to nature, and a soil once highly fertile. But the Seckel pear trees have exhausted the soil, because it had only a certain amount of pear tree elements, and languished for more food. In Boston, they know that nature is a hard mother, and they rely on art, trenching the soil twice as deep as nature makes it, and supplying an abundance of food for the growth of the tree and fruit. Hence the average size of the Seckel pear in Philadelphia has dwindled down in twenty years from an inch and three-fourths in diameter to a little more than an inch; while in Boston it has been raised by high culture to between two and three inches in diameter.

Some soils, however, contain in themselves an almost inexhaustible supply of natural food for fruit trees. Even long culture wears out such soils slowly, because the mineral elements of fertility gradually decompose and form new soil. We have before us a couple of Seckel pears, of extraordinary size and beauty, sent us from Brandon, on the James river, Virginia, one of the largest and oldest estates in America, having been cultivated since the earliest settlement of the country. This estate still shows large fields, which under the present good management (i. e. the judicious application of lime,) yield thirty bushels of wheat to the acre. But the Seckel pear trees here, without any special attention, still bear larger and finer fruit than we have seen in Philadelphia. It is useless, with such proofs of the effects of soil and culture upon fruit, for our Philadelphia friends to talk about the "running out" of so modern a pear as the Seckel. It is the soil which has run out, not the variety.—*Downing's Horticulturist.*

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There are but two possible modes in which the produce of the earth can be increased; one by rendering fresh land servicable, the other by improving the fertility of that which is already cultivated."—HALLAM.

SIMON BROWN, EDITOR.

FREDERICK HOLBROOK AND HENRY F. FRENCH, ASSOCIATE EDITORS.

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DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. IV.

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RAYNOLDS & NOURSE, PROPRIETORS.
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SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

A NEW VOLUME.

Our most respectful bow was made to old Father Time in our last number, as he floated by us, as gracefully as the thistle's down on the gentle October breeze. Bearing him company through the Past, he has wafted us quietly along his ceaseless current, and landed us on the shores of this New Year. Happy are we to greet so many fellow-passengers on this side the boundary line, to wish for them continued gales of prosperity, and large exemption from inroads by the sharp "tooth of Time."

To the hundred thousand who compose our conversation Club,—our respected readers—we wish this may be a Happy and pleasant Year. You can do much to make it so, yourselves. Fling regrets to the winds, engage in honest and earnest labor—no matter what it may be—and these blessings will be yours as surely as contentment came to old Isaac Walton's friends who "loved virtue and angling."

It is scarcely necessary to enter into detail of what it is our intention to do in this new year. The age, character and purposes of the New England Farmer are already well known. For nearly thirty years it has been welcomed to unnumbered homes in the country, until it has gained a popularity and strength which enables the Publishers to avail themselves of every improvement of the age which will render it more valuable to the reader. In nearly every State in the Union, in Canada, England and Scotland, its pages are regularly perused. Its purposes are still

"To improve the Soil and the Mind,"

to note the progress of Science, Experiment and the Common Practice, and declare their results, with such reflections, deductions and opinions, as seem to be called for to make them available everywhere on the farm. To accomplish this, men of distinguished ability in all the various departments of husbandry are enlisted with us. Scattered in different parts of the country, they note the pro-

gress of improvement—the march of mind—in their locations, and centre them here, whence they are sown broad-cast over the land. In this manner most that is valuable, however remotely it may originate, will be gathered up and laid before you.

To cling to old modes of husbandry would be as wise as to practice old modes of travelling,—and no more so. What was well enough once in many particulars, would be expensive or ridiculous now.

Public favor justifies us in enlarging the Farmer in the book form, to 48 pages, instead of 32, and issue it on the first of each month instead of once a fortnight, as heretofore, although the price will remain the same. This is done to afford more room for a full and free discussion of the new and important phases in agriculture which are constantly coming to light through the aid of science.

The terms and condition of the paper will remain as heretofore. We offer no system of clubbing or premiums, and no modes of "pressure" whatever, to increase our list. We want no man's money who is not satisfied that he gets that money's worth in the paper which he receives.

¶ We thank our brethren of the Press for their numerous and favorable notices, and shall endeavor still to merit their commendations. To those who have gathered up our sheaves and scattered the wheat among their flocks, without informing them where they obtained it, we only recommend an early perusal of Lord Chesterfield!

And now, with coat off, and sinews strong and lusty, we are again ready to enter the field with our fellow-laborers, and go to work "with a will," as the sailors say. While you plow and harrow the soil, we will plow out useful experiments and improvements with the pen, and harrow the world over for your pleasure and instruction. So we are co-laborers, hitched in the same team, and dependent upon each other for smiling fields and bounteous crops.

¶ Weeds exhaust the strength of ground, and if suffered to grow, may be called garden sins.

WINTERING SHEEP.

Winter Arrangements and Shelter.—Late in the autumn, when the grass remains frozen during the most of the day, a few locks of hay or bundles of stalks are sometimes flung out to the sheep. But it is not commonly till the ground is covered with snow that they are brought to the barn and the foddering regularly commences. They are now separated into two or more flocks for the winter. Not more than a hundred or a hundred and fifty sheep should be enclosed in one yard. Where the flock contains two or three hundred sheep it is commonly divided into three parcels. One of these contains all the most healthy and vigorous subjects; the second contains those that are more thin in flesh and feeble; and the third embraces the lambs. Small flocks of a hundred or less have only the lambs and perhaps a few invalid sheep placed in an enclosure apart from the main flock.

The strong sheep are often driven to a stack that has been built upon a knoll or other part of the meadow that needs fertilizing, and are there kept through the winter. Sheds are here provided for them, and not unfrequently they have no shelter whatever save the leeward side of the stack. One of my informants is under the necessity of having his strong flock on a lot four miles distant from his residence. They are constantly foddered but once a day; yet they are passing the winter in as good condition as his other flocks.

The "hospital flock," as it is frequently termed, and also the lambs, are placed each in separate yards, contiguous to the barns, where they have ample sheds for their protection in inclement weather, and can be regularly fed and carefully attended to. As the raw wind of a driving storm, and often snow also, penetrates to every part of open sheds, and the most exposed portion of the flock is therefore but little better sheltered than if it was wholly out in the storm, many prefer stables or enclosed sheds, with only a door for entrance. And some are accustomed to close the door and confine the flock every night, and not let it out at all upon stormy days. As sheep in a storm habitually stand all day huddled together in a small space, it is maintained that they are better off to be kept dry in a stable thirty feet long and ten in width, thereby allowing but three square feet to each sheep. Here they are enclosed every night, and all day in stormy weather, being fed in a rack the length of one side of the stable. This space is deemed sufficient for that number of sheep, and no injury has ever resulted from such close confinement, except that sometimes towards the latter part of the season the wool has been slightly started on the sides of some of them in consequence of rubbing so much against each other.

Winter feeding, hay.—At the present time, hay is the chief, I may say the only article of food on which our flocks are sustained during the winter season. Well made hay of a good quality, it is admitted on all hands is the only kind that is suitable for sheep. Coarse sedge and bog hay they will not touch. Short hay that grows in natural meadows, containing some timothy but consists mostly of red top, and a variety of other grasses, is far better than the clean timothy that is cut from newly seeded fields. It should be fed regularly thrice each day. Almost every sheep yard is furnished with mangers or racks for feeding, for where it is scattered it is spoiled by the animals

running over it. The common mangers in use, which are about as good and economically made as any, are square boxes formed of rough boards, the length of the board and about three feet wide without bottom or top, and with an opening the length of each side, sufficiently wide to admit the head and not the body of the sheep. The hay is thrown in at the top, and whenever the bottom becomes filled with snow, ice, and grass seeds, these boxes are readily elevated or set on other spots in the yard.

Though hay alone is mostly used for wintering sheep, every farmer adapts himself to the amount and supplies of this and other kinds of provender. If his store of hay is short, straw is made use of once a day, or unthreshed oats, which latter are regarded by most of our farmers as being economical, thus alternated with hay, as hay alone. Corn stalks too are excellent for sheep. And when we recur to the fact that there is no other one of our domestic animals that relishes so many different species of vegetation as the sheep, we seemingly are doing violence to its nature when we confine it to dry hay alone nearly half the year. Unthreshed oats, or some other food once each day, or each alternate day, will probably keep a flock in better condition than an equal value of hay alone.

Thus, with one kind of food or another, every husbandman makes it a point to keep his flock constantly in good order, well knowing that if this is not done he will be a loser thereby ere grass comes in the spring. Sheep more than any other stock must not be allowed to become poor. Whenever a sheep gets so weak that it is unable to stand (as some will where a flock is scantily kept) all efforts to recruit it are unavailing. Once down it is down forever.

About five and a half months is the length of time sheep require to be foddered by us; and the keeping of ten sheep is currently regarded as equivalent to that of one cow. Fourteen or fifteen tons of hay is the least that a hundred sheep can be carried through the winter upon, and if fed more liberally they will consume twenty tons without any waste.

Expense of keeping Sheep.—As we have already seen, the annual income from sheep, of the kind of which most of our flocks are composed, has of late years been less than one dollar and twenty-five cents each. Nay, it is known to be a fact that many of our common flocks in some of these years have brought their owners a return of only seventy or eighty cents to each sheep. How this compares with the expense of their keeping we come next to examine.

The current charge for pasturage is from one and a half to two cents per week. The first of these sums is the lowest for which pasturage is ever hired, and it is not only upon the mountain lands adjoining us in Vermont that it can be obtained for that price. And the time required in driving and occasionally repairing hither to see to the welfare of the flock is more than equivalent to an additional half cent. Sheep are pastured somewhat more than half a year; say thirty weeks. This at two cents per week amounts to sixty cents. When pasturage is hired by the season, however, as it sometimes can be, the current charge is fifty cents.

Twenty-five acres of good pasture land is required as the least that is adequate to sustain a hundred sheep. Such land is sometimes bought for twenty-five dollars per acre, though it is current-

ly valued at five or ten dollars higher than this. Six hundred and twenty-five dollars then may purchase the requisite amount of pasture land for maintaining one hundred sheep. Thus without taking into account the cost of keeping up fences, &c., the mere interest on the value of the land will be forty-three dollars and seventy-five cents, or forty-three and three-fourths cents for each sheep. On the whole, therefore, fifty cents must be regarded as the lowest sum for which a sheep can be kept through the summer.

With respect to wintering. Fourteen tons of good hay is the least quantity that any one supposes the strictest care can carry a flock of one hundred sheep through the winter upon, and more than this is usually fed.—*N. Y. Transactions.*

For the New England Farmer.

HOW TO MEASURE AN ACRE.

The *Farmer* of last week contains an article, which is also copied into this week's *Congregationalist*, from the *American Farmer*, headed "How to Measure an Acre," which, if correct, "will not only be valuable to farmers," and "to the reader generally," but certainly "knocks into pi" all my previous conceptions of *square measure*, and, indeed, of all measure.

In order to understand the following *analysis*, please refer to the article, which you will find in the *New England Farmer*, (weekly,) for Nov. 29th, 1st page, last column, near the bottom:

"Land—30½ square rods make a square rod."

According to my "Arithmetic" 40 square rods make one square rod.

"4819 square yards make one acre."

I supposed before that 4840 square yards make an acre, "or 157 rods make one acre."

According to foregoing statement, viz.:—30½ square rods make a square rod; 4 square rods make 1 acre,"—121 rods make 1 acre;—but instead of either "121" or "157 rods make one acre," 160 rods make an acre.

"In measuring an acre by yards, the usual practice is to trace off 79 yards in length and 79 yards in width; this, in a rough way, may be considered near enough for practical purposes."

Rather too "rough," as 79 by 79 produces 6241, which is 1422 more than 4819, said above to be an acre, and 1401 more than 4840, the *real* number of yards in an acre.

"But as 79 yards either (each?) way makes 4999 square yards."

This must be by their *new system* of multiplication.

"It exceeds one acre by 69 square yards."

4999 exceeds 4819—said above to be the number of square yards in a square acre, by 180; and, it exceeds 4840, the *true* number of yards in a square acre, by 159.

"To determine an accurate acre, it should be measured 78 yards in length by 66 1-7 yards in breadth."

By my system of multiplication 78 by 66 1-7 produces 5,159 1-7, which is 340 1-7 more than 4819, one of their square acres, and 229 1-7 more than 4930,—the difference between 4999 and 69, another of their square acres,—and it is 319 1-7 more than 4840, my square acre.

"The same result may be arrived at by measuring 229 feet in length and 196 feet in width."

229 multiplied by 196 produces 44,884, which, divided by 9, the number of square feet in a yard, gives 4987 1-9. Is that the same as 78 by 66 1-7?

"Or, by measuring 78½ yards in length by 66 yards in breadth."

78½ by 66 produces 5170, which is neither 5159 1-7, the product of 78 into 66 1-7,—nor is it 4987 1-9, the product of 229 feet into 196 feet, reduced to yards.

There, according to all my "*mathematics*," in the 14 lines now under review, there are two, and *only* two truths communicated, viz: "4 square rods make 1 acre," and, "640 acres make 1 square mile," together with an almost endless number of mistakes and contradictions, some 15 of which I have named above. No less than 5 different numbers are given as the accurate number of square yards in a square acre, *no one* of which is correct.

Can you wonder that I am perplexed, when I remember that this "rule" was taken from the *American Farmer*, and after passing the keen scrutiny of the *New England Farmer's* Editorial Quinary and the Theologico Editorial Quaternary of the *Congregationalist*, is given to their fifty thousand readers as "information not only valuable to farmers, but to the reader generally?"

Will you, Messrs. Editors, kindly come to my aid! Please say where the difficulty is; whether in the *southern latitude* of the *American Farmer*, in the much-abused, yet patient *types*, or in the brain of a constant and interested

READER OF THE NEW ENGLAND FARMER.

South Weymouth, Dec. 6th, 1851.

REMARKS.—The error cannot be in the brain of our pains-taking and "constant-reader," we are confident. It might have been a *dolt-head* who compiled the article originally, and his blunderings since magnified by the types. We cannot relieve you, and must rest satisfied with your results until we are caught at a country inn on some rainy day, where there is nothing to read but a last year's almanac. It makes one's head ache to think of the labyrinth of figures in which you have been involved, and draws from us hearty thanks that you noted the errors, and were so obliging as to correct them yourself.

FARMERS' DWELLINGS.

We need a great improvement in this respect; we need a distinctive *rural style of building*—comfort and convenience combined with neat and simple elegance. Nothing expensive, gaudy or obtrusive, but graceful in form, chaste in ornament, with quiet, neutral colors, sweetly blending with the surrounding green, all breathing an air of peaceful calm repose on which the eye may rest with pleasure. I would gladly enlarge upon this did time permit. The house should not only be sheltered, but adorned with trees—none more beautiful than those of our own forests.

A few choice fruit trees of various kinds, with grapes and smaller fruits which need but little care, with flowering shrubs and ornamental climbers, should be there. None of the adornments of beauty are more graceful or attractive than fragrant and blooming vines around the rustic porch. And let there be a garden, too—it need not be a large

one—not the unsightly patch of neglected earth sometimes so misnamed, intended for potatoes and cabbages, but filled with burdock and nettles, but a neatly arranged plot for shrubs and flowers, laid out with taste and kept with care—cultivate a taste for flowers, and teach your children to love them. In doing so, you give them new sources of pleasure—new facilities for enjoyment. And do not deem the time they bestow upon them lost time; it is well bestowed, and will yield a rich return in pure and simple joy, and the cheerful love of home. —Address of T. D. Bural, before the Ontario Agricultural Society.

ENCOURAGEMENTS.

Many hearty respondings are coming to us from every quarter; our efforts appear to meet with favor and stimulate a corresponding zeal in the friends of an improved course of husbandry every where. New facts or the skillful discussion of old ones, interest and draw out new friends in the great cause. A new love for country life and for rural occupations is growing up in the bosom of many who have ever looked upon them with indifference if not disgust. This love has been principally created by agricultural papers: by judicious representations of country scenery, life and occupation, and the helps they find there to lead useful and happy lives in country districts.

An esteemed correspondent in closing a communication in relation to an experiment with fowls, says:—"It pays well to take agricultural papers. The increase realized is owing to skill in management derived from reading agricultural papers and books. Without them I should have had no faith in the economy of keeping fowls, and should have lacked the requisite knowledge to make them pay their own way and the care of them. The papers cost but little in comparison with the 'material aid' they bring to every tiller of the soil, or grower of stock. The farmer's stock in papers is altogether the most profitable stock he can keep. * * * The mightiest sinews of war, in man's battle with the clods, is 'agricultural science.'"

A correspondent in another section of the country, in speaking of the needed reforms in the common practice and of the subject in general says:—"I believe the Farmer is rapidly gaining popularity in this region." We quote one other paragraph, and trust in so doing that we shall not invade the sanctity of a confidential letter. It is this:—

"When I was but a youth, I formed one decision to which I wish to adhere. It was this. *I would make it the leading motive and aim of my life to be useful.* Every other interest, of fame, or of wealth, or of pleasure, should be subservient to this."

These few simple words comprise our whole duty, and they were uttered as a sort of explanation by a professional man for engaging his thoughts in matters relating to the farm, in accordance with that sense of duty implied in his remarkable words.

Another correspondent in alluding to the death of Mr. Cole, after giving us a hearty welcome, adds:—A kind "Providence has not left the field he was wont to cultivate to go untilled. The work of agricultural reform will not lack agents to carry it forward, for God's hand is in it. It is identified too closely with human welfare to be forgotten of him. Though a clergyman, I am a farmer's son, and a gardener, and make experiments both in crops and stocks, and I regard your professional business and my own as intimately connected."

There is a more intimate relation with each other in all our various avocations than most persons have found time to observe. Our standard ought to be to labor on cheerfully in our office, whatever it may be, and bring our work to perfection! Nothing short of perfection should satisfy us; and when the leading motive and aim of life shall prevail to be *useful*, then excellence will crown our efforts as surely as the meridian sun is the crowning glory of the day.

THE APPLE CROP.

When, a few years since, the distillation of cider began to be discontinued, many men were very much frightened on account of the entire loss of their orchards, and a few persons began to cut down their trees. Previous to this time, apples picked up and carried to the mill, had been worth about six cents a bushel, and cider at the press, sixty to seventy-five cents, sometimes less. When the trees bore well and the ground was smooth and free from high grass, small stones, and all things that could trouble in picking up, and the mill was near, you could get your apples gathered and the cider made for one-half of it, minus every tenth barrel for the use of the mill. The apples in the orchard, ungathered, were worth about three cents a bushel; "sauce" and "drying" apples ten to twelve. If gathered, fifteen to seventeen cents, and prime, nineteen, apples of grafted varieties twenty-five cents.

But as temperance progressed, and the distillery fires ceased to burn, and cider as a drink began to be discarded, the complaint of an overstock of apples became less, cider rose to a dollar or more a barrel, and apples in proportion, and to this day the price of apples has advanced just in proportion as the quantity of cider has diminished. For three or more years, cider apples have been worth, delivered in the fall, about twelve cents; common cooking apples twenty-five to thirty-seven, and grafted winter fruit, fifty to seventy-five. Now what has caused all this change? In the first place apples have been found worth ten to fifteen cents to feed to stock. The curious idea that they contained no nutriment, and would diminish the quantity of milk if fed to cows, has been entirely exploded. If you will have cider you must pay what the apples are worth for other purposes, and for making, besides.

Then again, the time was, and not many years since, when we had but few villages so thickly settled but that each family could raise their own fruit. Now, with us, the villages of North and South Adams, Lee, Barrington, West Stockbridge, and Pittsfield, to say nothing of others, furnish a

market for more apples for eating and cooking than the county furnished thirty years ago. Look for a moment to that little world of brick walls which we call New York, with its hundreds of thousands of apple-eaters, and all to be supplied by others, out of the surplus remaining after their own wants are supplied.

Look at our other large cities, Boston, Philadelphia, Albany and hundreds of lesser ones. Then look at the broad south. Why, the market is not one quarter supplied. But the prices are most extravagantly high. The ground which would bring, at an average of the seasons, five dollars worth of greening apples, at present prices, would not keep half a sheep, or the tenth part of a cow. If cider apples were valuable productions at six cents per bushel, good grafted apples should be offered at fifteen to twenty at the orchard, gathered in the usual way, and should be picked and barrelled at twenty-five cents. And when the price comes thus, the demand will be increased four fold with the present number of inhabitants. They will thus become a profitable article for daily consumption in families where they are now only occasionally admitted as a luxury.

But the population is constantly and rapidly increasing, and this increase is mainly of non-producers, especially in the old States. The farming, fruit raising population is remaining about stationary, in many towns decidedly decreasing, while the increase is in the commercial and manufacturing cities and villages. This we deem an important consideration, in a correct estimate of the future demand.

Viewing, then, the present scanty supply, at the very high prices, the increased consumption which would follow, a reduction of price, a reduction which improved culture and a judicious adaptation of kinds to the varying seasons of the year would permit, and yet remunerate the producer, and the increase of population; that increase being almost wholly consumers. We believe there is no danger of a surplus until the quantity is increased twenty fold. And if the time should come when it will not pay for sending to market, it will be worth more than the cost of production to feed to cows, hogs, and horses at home.—*Culturist and Gazette*.

SALT AS FOOD FOR PLANTS.

Professor Way, chemist to the Royal Agricultural Society, in a lecture on this subject, stated as a conclusion to which his investigations had led him, that common salt was neither directly nor indirectly a constituent of the food of plants. He stated, however, as his belief, that salt did, in some instances, produce an action beneficial to vegetation, on some soils. He had not carried out his investigations to such an extent as to say, positively, to what this effect is attributable, but he was "led to believe that the common salt acted on certain silicates of lime present, in a way as yet not understood; and at the same time as it afforded a supply of lime to plants, gave rise, probably, to a modification of silica, important to the straw of the cereals."

In reference to Prof. Way's remarks, other members of the Society gave the results of their experience in the application of salt to land. Col. Challoner said he did not consider it acted simply as a manure on grain crops, "but it stiffened and

brightened the straw, and caused it to ripen from 3 to 5 days earlier than it would otherwise have done." Mr. Barrow has found salt improve the strength and quality of his wheat straw, his neighbors' crops having been laid while his stood well. Mr. Mechi said—"without being able to give the scientific reason, salt gave strength and brightness to the wheat straw and prevented its lodging." He applied it at the rate of 3 cwt. per acre, mixed with the same weight of guano.—*Selected*.

For the New England Farmer.

"NEW ENGLAND FARMER."

BY F. HOLBROOK.

The name, "New England Farmer," is a time-honored name. The journal first bearing it was most ably conducted through many volumes, received the patronage and contributions from the pens of men of the highest talent and influence, circulated among the farmers far and near, and fertilized the soil wherever it went. Most of its earliest contributors, together with its first Editor, men of a former generation, have passed from this life. Who that knew them, or that now knows of them, ever failed to render them profound respect? They were an honor to their age and country; they finely illustrated all those characteristics which distinguish man as a reasonable and an intelligent being, as an independent, a high-minded and public-spirited citizen; their zeal in forwarding the improvements of Agriculture amounted to no less than untiring enthusiasm; and their efforts gave a lasting impress to the agriculture of New England. Their contributions to the old journal are remarkable for vigor and comprehensiveness, and for practical adaptation to the wants of the farmer; and many of them, if republished in the New England Farmer of to-day, would grace and enrich its columns, and instruct its readers.

Then think of that old veteran agricultural soldier, THOMAS GREEN FESSENDEN, the first and principal editor of the old journal—a man whom every body knew, and honored for his talents and loved for his virtues. He was a most assiduous and untiring laborer in his vocation. To a practical knowledge of the processes of agriculture, he added an acquaintance with all the writings of merit upon husbandry, a respectable knowledge of science generally, a taste for literature, a rich vein of humor, and perfect readiness of pen in imparting all the information upon any subject in hand which could be elicited from books or from other sources. From early boyhood, he had an ardent love for agriculture. Hear him, in one of his editorials written in old age, express his increasing fondness for it: "We may, perhaps, be allowed to state that our predilections to the Art of all Arts, increases in a direct proportion to the attention we bestow on it; for like everything else possessing intrinsic excellence, the more intimate the acquaintance, the more obvious are its merits—the more we explore the avenues of culture, the stronger the perception that its ways are profitable as well as pleasant, and 'all its paths are peace.' And, indeed, the world is becoming practically impressed with the primary importance of those pursuits which feed and clothe the human race; and so which we are indebted for all that makes life a blessing, or gives civilized a superiority over savage existence."

I have all the volumes of the old Farmer, and

prize them very highly, often consulting them, for the information desired. Turning over their leaves, I cannot but admire the untiring research of the editor, and that he did not hesitate to draw in contributions to its columns, in the form of timely and tasteful extracts, agricultural, scientific and literary, from all sorts of books and periodicals. Inquiring for the causes of the wide-spread influence and usefulness of the old journal, I am led to conclude that they are to be found in the power with which it treated of practical agriculture, and in the point and aptness of its scientific and literary extracts,—such extracts being of a character to interest the farmer, to *provoke* him to a further knowledge of the subjects to which they alluded, thus tending to create a desire for general reading and for mental culture.

What should be the aim of the Editors and Correspondents of the "New England Farmer" of to-day, to make it a journal interesting, instructive and highly useful to the farmer?

I will briefly submit a few propositions, which appear to me to be, in part, an answer to this question.

1. The men now cultivate the soil of New England, who are perfectly competent, if they please, to sustain the columns of the New England Farmer most ably. No one should hesitate to communicate his experience in farming. No one writer can give the best and most reliable information upon *all* agricultural subjects. One man can treat of some subjects "like a book," and another of some other subjects; hence a goodly number of correspondents, each giving information upon those topics which have most deeply engaged his observations and thoughts, will give freshness, variety, originality and ability to the journal; and upon the principle of the motto, "Help one another," all will be entertained and instructed.

2. The Editors and Correspondents of the New England Farmer should keep its columns well-stored with articles inculcating good sound practical farming. By the expression "sound practical farming," I do not mean that the farmer should be urged to hug old customs because of their antiquity. Some of the old methods of culture are good to-day; others were proper in earlier times and circumstances, but are wholly improper and out of place in these times; and to persist in the practice of them now, when new and better modes have been discovered, is anything else than *sound practical farming*. Without hastily embracing theoretical speculations, the New England Farmer should yet be up even with the spirit of progress now so generally moving the great business interests of man, and keep pace with the foremost in endeavors to give currency to any and all improvements calculated to better the condition of the soil and of its owner. Its readers should be told how to increase and apply manures for the speedy and profitable restoration of fertility to exhausted soils, and since the capacity of mother earth for production is at present almost undefinable, how the harvests of our most prolific soils may be increased. They should be advised as to what constitutes good tillage, in all its manipulations, how their estates may be made more valuable, their crops and their annual cash income increased.

3. In addition to a full assortment of articles upon the practical details of good husbandry, the pages of the journal should be graced with occasional papers considering agriculture in its relations to man as a social being, and in its comprehensive relations to society, to great National interests. Articles of this sort may admit an elegant diction, a high order of composition. The farmer has interests besides those pertaining to mere dollars and cents, and should occasionally contemplate the native dignity, the pleasures and the comprehensive relations of agriculture. My eye this moment rests upon an editorial article in the old New England Farmer, written by Mr. Fessenden, from which I am tempted to make a short extract, illustrative of my meaning. He says:—"We are highly gratified in observing that the interest which attaches to the primitive and most important of the arts is every year perceptibly increasing in zeal, knowledge and perseverance. If we still continue thus to press forward, we cannot fail in the common course of events to become not only prosperous as individuals, but powerful, respectable and respected as a nation. Improvements in agriculture are pioneers, heralds and companions of all other improvements. The accurate science and correct practice of tillage alone can precede and introduce the charms, the decorum, the dignity as well as the substantial and indispensable requisites of civilization. If Ceres did not sustain the Graces, as well as support Minerva and her retinue, they would disappear as the tints of the setting sun fade in the sky when evening advances." This extract is a good example of comprehensive, elegant writing. The graceful and pointed illustration in the last sentence, coupling an allusion to the ancient classics with a beautiful figure of the writer's own, showing the dependance of all upon agriculture, is fine. If the objection be raised that such writings are unadapted to the tastes and wants of the tillers of the soil, I reply that many of them do perceive the merits of fine compositions, and that the number of such is rapidly increasing; and if others can only appreciate those articles directly addressed to their cupidity, it is high time to begin an effort to elevate their tastes.

4. There should be articles in the paper from time to time, reminding the farmer that "mind makes the man," and that it is at once his interest, his duty, and his high privilege, to expand, ennoble and refine his mind by cultivation. It is his interest to do so, because his calling brings him in daily contact with the great and more or less intricate laws of nature, which cultivated mind alone can penetrate, and an intelligent understanding of which has a direct money bearing upon his business: it is his duty, because a cultivated mind enables him to take high rank and to wield a large and good influence in society, because he cannot properly discharge his obligations as a citizen of the Republic without intelligence, and because the proper regulation of the passions and cultivation of the intellectual faculties is a sacred trust committed to him which he is by every principle bound to respect and improve: it is his privilege, because with a mind expanded and refined by knowledge, he is in a condition to perceive and pursue noble ends, to make high attainments, and to enjoy pleasures of which an ignorant man is incapable, and because so far he is realizing the designs of the Creator, who endued man with mind that he might here enter upon

a path-way of progress in knowledge and happiness, having nothing short of everlasting for a limit.

It is clear to my mind that an agricultural paper fails of discharging its whole duty to the farmer, if it does not, with line upon line, impress him with the importance, the necessity, of education. It should remind him that in the most hurrying seasons of the year, while his hands are busily engaged in the labors of the farm, his mind may find abundant materials for observation and thought, and thus for improvement. It should speak to him of the many hours, or half-hours, at all seasons of the year, which he may devote to reading, of the long winter evenings, of those cold inclement wintry days, those days

"When Boreas, blustering, piles the snow-drift chill,"

all of which, if improved by reading, will do wonders for him. The editor should always be mindful of him in this regard, and by friendly counsels, and by judiciously selected articles, gathered in from all sources, may jog his mind as to the subjects worthy his investigations,—thus contributing to his pleasure and improvement.

5. The New England Farmer should occasionally contain articles, illustrated with engravings, calculated to create in the public mind a chaste rural taste. The neat modest cottage with handsome grounds adorned with flowers, shrubs and trees, has a most potent influence for good upon the mind. Our farmers, and the dwellers in country towns generally, would undoubtedly find both pleasure and interest promoted by a more rural style in building and in the arrangement of grounds, than commonly prevails. Many farmers have ample means to adorn their estates, and the number of those who are desirous of doing so is constantly increasing. Even those who are not wholly out of debt, but who by enlightened well-directed industry are enriching their lands and increasing their income, may at the same time, in a hundred little inexpensive ways, embellish home, thereby increasing its money value much beyond the cost of such adornments, making it an attractive place, which will most likely make it a happy place. What more fitting influence than an attractive rural home, intelligent, industrious thrift there reigning, to make its owner virtuous, a lover and firm defender of country, a man worthy of citizenship under free institutions, and to bring around his family all that simplicity, innocence and happiness which this world can give. Well has the poet pictured such a condition of things:

"Now sober industry, illustrious power!
Hath raised the peaceful cottage, calm abode
Of innocence and joy; now, sweating, guides
The shining plowshare; tames the stubborn soil,
Leads the long drain along the unfertile marsh;
Hides the bleak hill with vernal verdure bloom,
The haunt of flocks; and clothes the barren heath
With waving harvests and the golden grain.
Fair from his hand behold the village rise,
In rural pride, 'mong intermingled trees!
Above whose aged tops the joyful swains,
At even-tide descending from the hill,
With eye enamoured, mark the many wreaths
Of pillared smoke, high curling to the clouds.
The streets resound with labor's various voice,
Who whistles at his work. Gay on the green,
Young blooming boys, and girls with golden hair,
Trip nimble-footed, wanton in their play,
The village hope. All in a reverend row,
Their grey-haired grandaunt, sitting in the sun,
Before the gate, and leaning on the staff,
The well-remembered stories of their youth
Recount, and shake their aged locks with joy.
How fair a prospect rises to the eye,
Where beauty vies in all her vernal forms,
For ever pleasant, and for ever new!

Swells the exulting thought, expands the soul,
Drowning each ruder care; a blooming train
Of bright ideas rushes on the mind,
Imagination rouses at the scene;
And backward, through the gloom of ages past,
Beholds Arcadia, like a rural queen,
Encircled with her swains and rosy nymphs,
The mazy dance conducting on the green.
Fat on the plains, and mountain's sunny side,
Large droves of oxen, and the fleecy flocks,
Feed undisturbed; and fill the echoing air
With music grateful to the master's ear.
The traveller stops, and gazes round and round
O'er all the scenes which animate his heart
With mirth and music. Even the mendicant,
Bowbent with age, that on the old gray stone,
Sole-sitting, suns him in the public way,
Feels his heart leap, and to himself he sings."

BREEDING HORSES.

The report of the committee on horses, for the Chittenden County, Vt., Agricultural Society, contained some good remarks. In addition to the hereditary transmission of qualities, it observed, "The progeny will inherit the united qualities of the parents. The good as well as the bad qualities will descend from generation to generation. Hence you will see the importance of a knowledge of the parentage, not only as to the sire but also as to the dam. Peculiarity of structure and constitution will also be inherited. This is an important consideration, though too much neglected, for however perfect the sire may be, every good quality may be neutralized, if not overcome, by the defective structure of the dam. Let the essential points be good in both parents; but if there must be some minor defects in the one, let them be met and overcome by excellencies in those particular points, in the other parent. We would also advise you to let your breeding mares be in the full vigor of life. Do not put them to the horse too young, and especially do not let your mares be incapacitated for work by reason of old age. If so, you may expect that the foal will have a corresponding weakness, and scarcely will a single organ possess its natural strength. Our farmers are usually too negligent in the selection of their mares. They are tempted to part with their best mares, and to breed from those which are inferior."

The committee speak of a young horse of the Morgan stock, bred by Judge Bennett, as having "great compactness of structure and action of the best kind."

IGNORANCE OF GREAT PHYSICAL TRUTH.

How few men really believe that they sojourn on a whirling globe, and that each day and year of life is measured by its revolutions, regulating the labor and repose of every race of being. How few believe that the great luminary of the firmament, whose restless activity they daily witness, is an immovable star, controlling, by its solid mass, the primary planets which compose our system, and forming the gnomon of the great dial which measures the thread of life, the tenure of empires, and the great cycles of the world's change. How few believe that each of the millions of stars—those atoms of light which the telescope can scarcely descry—are the centre of planetary systems that may equal, if not surpass our own! And how very few believe that the solid pavement of the globe, upon which they nightly slumber, is an elastic crust, imprisoning fires and forces which have

often burst forth in tremendous energy, and are at this very instant struggling to escape—now finding their way in volcanic fires—now heaving and shaking the earth—now upraising islands and continents, and gathering strength for the final outburst which is to usher in the new heavens and new earth “wherein dwelleth righteousness.” Were these great physical truths objects of faith as well as deductions of reason, we should lead a better life than we do, and make a quicker preparation for its close.

For the New England Farmer.

DOMESTIC POULTRY—HEN HOUSE.

BY G. TILLINGHAST HAMMOND.

A poultry house need not be expensive and yet be as good for the farmer as one with fancy fixings that no one knows the use of. Of whatever shape, it is better to have it too small than too large, in winter especially. For if too large the hens get together in one corner in order to keep themselves warm. While, if of the right size, they can promenade as much as they please; and have the proper amount of exercise.

If you have plenty of room in your stable or barn, a room partitioned off there will do. Having built the partition, all the cracks should be well battened up to make it warm. It should have good sized windows fronting toward the south, if possible, and it should be well whitewashed, both for neatness and to make it lighter. Then divide it into two apartments; one to be used for the roosting room, the other for their occupation during the day. It would be better if they had no access to the roosts in the day. The day room should be furnished with gravel, chalk, old mortar, and such other materials, to assist in making the shells to their eggs. Also sand and ashes, which are good for a dust bath, put into shallow boxes so that the room may not be made untidy. The room should have a good plank floor which should be often swept.

If you wish them to lay in winter they must be furnished with animal food, and vegetables, every few days, beside their regular supply of grain, which, in my opinion, had better be kept in hoppers constantly before them.

Nests can be made in a great many different ways. Some use barrels, which answer well; small boxes, however, are just as good and take up less room. They should be filled with good clean straw with one nest egg, (better artificial;) as soon as laid the eggs should be taken from the nest, or at least as often as once a day.

In summer, if your fowls have a large yard to roam in, it will not be found necessary to furnish them either with meat or materials to make the shells of their eggs, for they will get them from the earth.

In the spring a yard should be fenced off for them in which they will thrive better without doing any mischief than if they were allowed to run at large, in which case they are often very troublesome in newly-sowed fields. The roosting room should be thoroughly cleaned as often as once or twice a week, and the floor sprinkled with lime.

If these few directions are carefully attended to we will ensure an abundance of eggs.

Brooklyn, N. Y. Dec. 1st. 1851.

BLANKET YOUR HORSES.

Men and horses, only, sweat. So say the medical men whose business it is to investigate the wonderful living mechanism of both. The ox cools off by accelerated respiration: if heated in the furrow, he partially opens his mouth, drops his tongue, and by rapid respiration, or breathing, throws off the excess of heat which has accumulated in the system. The dog which runs at the side of the carriage through the intense heat of a July sun, dashes into the cold spring with impunity and returns refreshed, having no perspiration to check, “when men or horses submerged in a similar manner would suddenly check perspiration, and if they survived the shock, it would be but to die with acute or chronic inflammation.” In violent motion the respiration of both men and horses is increased, but not sufficiently so as to carry off the heat that is generated—they perspire through the skin, the pores of which become opened or enlarged, and it is while in this condition that both are exceedingly liable to be injured, and when great care is necessary to preserve the health of either.

We saw a noble looking animal the other day standing by the road side, wet with perspiration, dotted with white foam, and apparently highly heated. There he stood, unchecked by rein or halter, faithfully waiting his master's return. The cold was intense, the mercury then being below zero! Impatiently he pawed the ice under his feet, champed the bit, and wildly flung his head from side to side, while his lips were contracted and nostrils collapsed, giving him a fierce and unnatural appearance. No blanket covered his wet and heated body, while the keen morning air froze stiff the moist long hairs that stood out from the skin. He was evidently suffering severely. And this is no uncommon sight. So little is still known of the physiology and functions of the horse that men who would refuse an extravagant price for a favorite animal suffer him to stand in the condition which we have described.

If the horse mentioned escaped an attack of colic or violent inflammation in some shape, it was his good fortune, and not from any wisdom or humanity on the part of his owner.

Even in mild weather, though it may be summer, men nor horses should remain quiet in a cold draft when heated and wet with perspiration. Millions of the colds complained of would be prevented by observing this simple rule, and thousands of valuable lives preserved which are now annually extinguished.

But you, who value the noble animal which you control, when you “rein up” for business or pleasure, let the mantle of charity come over your steed in the shape of a good warm blanket. Depend upon it you will find it cheaper than physic, travelling on foot, or drawing your carts yourselves.

LONG WOOLED SHEEP.

The animals, of which the above is a portrait, were exhibited at the late Fair in New York, and are the property of J. McDonald and William Rathbone. The principal recommendations of this breed, "The Leicester," are its fulness and beauty of form; greater weight for their size than other sheep; early maturity; an unequalled propensity to fatten, and the weight of their fleeces and length of wool. They have small heads, and very little offal.

The wool business is becoming one of magnitude and importance, and it is an object for the farmer to possess a breed yielding both good fleece and flesh. This plate was procured expressly for the columns of the Farmer, and will be succeeded by engravings of other breeds which are considered among the best.

THE AMERICAN MUCK BOOK.

We expressed our high opinion of this book in the Farmer of Nov. 29; and upon a more thorough examination of its contents, find that opinion fully sustained. Below we give the judgment of one much better qualified to speak of its merits than ourselves. It is a very handsome volume, price \$1, and for sale in this city at the bookstore of Messrs. Tappan & Whittemore:—

Boston, Nov. 6th, 1851.

DEAR SIR:—I have the pleasure of acknowledging the receipt of a copy of the "American Muck Book," recently published by you, and edited by Mr. D. J. Browne.

From an attentive examination of the pages of this book, I have come to the conclusion that it is one of the best works extant, on the principles of scientific agriculture, and the best compendium of our most recent knowledge of the nature of man-

ures and their adaptation to particular soils and crops. It cannot be expected that a single volume could possibly contain the whole sum of chemical knowledge, applicable to the science of agriculture; but on looking over the closely-printed and compact tables of analyses, and the abundant formulas, which this publication contains, I could not fail to be surprised at the industry manifested in preparing it. I was also gratified to find it so well adapted to the American system of husbandry, and so practical in its character. Its copious and accurate index adds not a little to its value. I shall certainly recommend it to my agricultural friends as a very useful book, and one necessary to every scientific farmer. I am

Respectfully your ob't serv't,

CHARLES T. JACKSON, *State Assayer, &c.*
To C. M. Saxton, Esq., N. Y.

CASTOR OIL FOR LIGHT.

The Jacksonville (Ill.) Journal says, it may not be generally known that castor oil is better for lamps than sperm or lard oil, which is the fact. Some years since, when this oil was cheaper than either of the others, the editors of that paper used it in their parlor lamps, much pleased with the result; it gives a white, clear, beautiful light, and does not clog the wick. It sells in Illinois at one dollar a gallon.

REMARKS.—Will some one who has the knowledge inform us whether any particular course of culture is necessary for the castor bean, what its product is per acre, and the best method of obtaining the oil. In the scarcity of the whale, and the high price of some of the lesser lights, we should be glad to know something more of the bean light. It is possible that the farmer, through this little leguminous plant, may yet shine out transcendently bright, beside finding profit in the trade. Let us have the light.

For the New England Farmer.

POTATOES AND THE ROT AGAIN.

BY A. G. COMINGS.

When I wrote my last article on this subject for the Farmer, it was my intention to make that the last which I would furnish upon that subject. But as the editor has taken the liberty to place my name at the head of the article, I find myself standing out before the world in the unenviable position of a new theorist; in opposition to the multitude of respectable writers who have agreed in the opinion that "the cause of the potato rot is ATMOSPHERIC." This is, for me, an unpleasant position; because, firstly, if I am constrained to differ from my friends, I prefer to hold the most modest and retired position with respect to them, until the reasons for my position are fully before them; and secondly, because I am not in a situation to spend that amount of time in investigating such subjects, and in writing for the press, that I could wish to have for that purpose, if I must stand out before the public in such an attitude. However, what is past is past, and now for the work before me.

The editor inquires, firstly, "Did not the potato grow with perfect soundness on coal-pit grounds twenty years ago?" They grew with soundness every where they were planted twenty years ago; but not equally good in flavor; being on some ground like the sound portion of a crop now, where many are diseased. And the farmers said of such, "These potatoes are soggy, and not fit to eat."—Such potatoes were produced then on such grounds as they rot badly on now, if my memory serves me in a right manner.

Second in view of the editor, "Does it not grow well now, on new land, where a thick mat of dry grass and roots are turned under, which would be the materials to give out carbonic acid in large quantities?" This question contains with it an affirmation, which is, that, "such materials give out large quantities of carbonic acid." They give out a quantity of the acid, as they are decomposed; but, unaccompanied by any stimulant, such as ashes or things of the kind, only a small quantity, when we compare the amount with that given off from a heavy dressing of manure. There is not much carbon in a thick mat of tender grass, and no very great amount in the roots. Besides this, these vegetable remains are decomposed very gradually, and they lay the ground open very much to "atmospheric" influences, which, in my opinion, are highly beneficial to the healthy growth of the potato. But take such a piece of ground where there is a great supply of vegetable remains, years old and yet undecomposed, there will be found much carbon. Apply any stimulant to produce rapid decomposition, and you may get a large growth and a rotten crop. This is precisely the state of the case with Mr. H., of Pelham, N. H., whose statement is given in No. 46 of the (weekly) Farmer.

Third question—"Does it not grow far better on such land, than on old land, though the old land may have received no manure for years?"

In answer to this question, we will say, on the old land there will be less growth, if the vegetable remains are all decomposed and exhausted, or if the soil is in such a state as to exclude atmospheric influences. Nothing will grow without a needed supply of the gases which enter into its composition. The question is not whether car-

bonic acid, in any quantity, more or less, is injurious to the potato? Not at all. It is well understood that the potato will grow most rapidly in a very rich and active soil, and that in such a soil, during the warm and wet season, a very large quantity of carbonic acid gas is generated. And on all such ground, especially where the soil is not very porous, the great crop is fearfully sickly. The excess of carbonic acid, not its presence in any quantity, is that to which we attribute the prevailing disease.

The decomposition of old sward takes place so gradually that very little fermentation is apparent, especially where the ground is not unusually rich and moist. There, a piece of newly cut iron will rust moderately, or, which is the same, it will become oxidized but moderately. On highly manured, or very rich old ground, where there is a great abundance of carbonaceous earth, there much fermentation will take place, iron will rapidly coat with oxide, and there look out for potato rot. (The oxidation of iron is more rapid, because of the large quantity of oxygen gas which is combined with carbon to form carbonic acid.)

THEORY OF ATMOSPHERIC INFLUENCES.

Unpleasant as it may be to dispute the correctness of the idea that the potato rot is caused by some poison which floats in the air, we must beg pardon of our friends for taking the liberty to dissent from them, and proceed to the discussion of the subject.

The editor expresses a common idea, and one with which I fully agree, when he says, "We have no doubt that manuring in the hill always has a tendency to induce the rot."

When I shall be convinced that manuring in the hill is an operation performed in the air, not in the soil, then it will be easier for me to believe that the cause of potatoes being more commonly blighted under such circumstances is atmospheric. Two square rods, side by side, may be planted with the potato. One rod shall be manured in the hill with strong manure, and the other not. There will be a great difference in the chances of a sound crop. But does not the same atmosphere float over both? Whence comes the disease, then? From the air? No. It originates in the soil.

The case of Mr. H., of Pelham, N. H., comes up. Two strips of land, side by side, are planted. Was the difference between them a difference in the atmosphere? Did not precisely the same atmosphere cover them both? Certainly it was, that the difference was in the soil, not in the atmosphere. If the addition of manure to one part, under circumstances calculated to prevent fermentation at the time the potato is most easily affected, was subject to another influence which moderated its decomposition, it would not induce disease.—Those circumstances might be in the action of the plaster, (sulphate of lime,) in the manure lying upon the surface of the ground, or in the dryness of the weather. When I can believe that the difference of condition of the two pieces was an atmospheric difference, I can more easily believe that the cause of the disease was in the atmosphere.

It has become a matter of surprise to me, that almost every man will tell what kinds of soil are most liable to give diseased potatoes, and what kinds of soil are most likely to produce sound ones, and then turn round and tell us that the cause of

disease is in the atmosphere, not in the soil. There appears to me to be something else than sound reasoning in all this.

Every observing man knows that in an uneven field, made up of knolls and hollows, the disease will begin in the hollows before it will upon the knolls, and yet, if the pestilence sweeps over the land in the moving atmosphere, it would be likely to strike the knolls first. Certainly, potatoes growing upon knolls are more subject to atmospheric influences. And certainly, they are less subject to disease.

CARBONIC ACID GAS.

This invisible agent is composed of carbon and oxygen gas. The burning of charcoal in a close room will produce a room full of carbonic acid gas; and no breathing being can live in it. A room newly plastered and kept close until it dries, no man can live in.

Carbonic acid gas is heavier than atmospheric air, and when much of it is generated in the soil, it will flow into the lowest places, while from its weight, it will mingle but little with the atmosphere. In deep pits, old wells, &c., it sometimes collects so as to be destructive to animal life, immediately when it is breathed. It accumulates in badly ventilated cellars, where there are old casks and a damp air, or where the decomposition of vegetable matter is going on.

In such cellars, and on such low spots of ground, highly manured, or in other ways prepared to produce much of it, there the potato is most liable to disease. This is a matter of fact and not mere speculation.

Clean and well ventilated cellars, where no old casks are rotting, are those for health.

In the warm and wet weather, in dog-days, it is sometimes the case that so much carbonic acid is generated in forests and fields, that during a heavy fall of rain, accompanied with some winds, the atmosphere will become charged with this gas to a perceptible degree. One will feel as though he breathed something unusual, and will perspire very rapidly when doing but little labor. A man may go into an old filthy cellar, where carbonic acid has been collected, and he will feel and perspire in the same way, under the same amount of exercise.

When such a state of the weather comes on; in the latter part of summer, it is common to hear the most observing among farmers, saying one to another, "This weather is the right kind to bring on the potato rot;" and so it has been abundantly proved to farmers.

REMEDIES.

Whatever will absorb the gases which serve to produce the evil, or moderate the decomposition of vegetable matter during the particular season of danger, will prove a remedy for the disease.

Lime may be used under such circumstances as only to stimulate the soil, and hasten the decomposition of vegetable matter. In such case, on very rich, or highly manured grounds, it will be dangerous to the potato. Applied in a caustic state about the beginning of the period when the soil and manure is most active, it will absorb the carbonic acid necessary to constitute it to the carbonate of lime. The application to the surface would, perhaps, be as well for this purpose.

Ashes, in the possessed amount of alkaline property, may be so applied as to stimulate the soil, as

was remarked of lime, and in such circumstances would be alike injurious. When applied, however, so as to neutralise acids, on moderately active soil, they will be beneficial.

Plaster, (sulphate of lime,) absorbs the nitrogen of saltpetre, (nitrate of potash,) or takes the same gas from the atmosphere, and holds it for the potato, or any other plant that needs it to feed upon. It is, generally, beneficial to the potato crop, and whether there are any circumstances under which it will be injurious, is not certain. It will not, however, prevent the disease, under very unfavorable circumstances, if it is a remedy at all.

Salt, which is a compound, in its first action upon soil moderates decomposition, and is beneficial to the potato; but injurious to Indian corn.

Charcoal, serves merely to absorb the rain-water, and hold it until it is taken up by vegetation. It therefore slightly moderates the decomposition of the soil, aiding to equalize its condition during wet and dry weather. It will, when free from other substances and agents, serve some good purpose in most soils.

Carbonic acid is not properly a part of the atmosphere, but at certain seasons of the year is generated in so large quantities as to become mixed with the gases of the atmosphere to an extent which produces great effects, and the breathing of men and animals throws out enough to make sensible men dread the effects of confinement, for sleep or any thing else, in small tight rooms.

We beg pardon for intruding so long upon the reader's attention, and perhaps the length of this article will deter some from reading it.

Being an interested student in the school of agriculture, it has been my desire to bring out from others as much light as possible, and, therefore have touched many points. c.

Mason, N. H., Nov. 18, 1851.

REMARKS.—The above is an exceedingly valuable article, and worthy the careful consideration of every reader—farmer or not. We think we fully understand the writer when he says that "the excess of carbonic acid, not its presence in any quantity, is that to which we attribute the prevailing disease." And this is a point to which we call especial attention, as there is danger of rejecting charcoal as a fertilizer, in the fear that it may be injurious to the potato crop. It is not the charcoal, but the large amount of carbonic acid produced in its rapid decomposition by burning, that is injurious.

For the New England Farmer

EFFECT OF SALT WATER UPON TREES AND SHRUBS.

BY S. P. FOWLER.

I thought it would be interesting to publish in the Farmer some facts in regard to the effects of salt water upon trees, shrubs and plants, caused by the flowing of the tide over a portion of my garden, in the great storm of April 16th, 1851. Such opportunities for noticing the inundations of the sea seldom occur. The garden was overflowed by the water about three hours, and the roots were laid bare by the motion of the waves, so that it became necessary to cover them with earth. Two Isabella and two fox grape vines

were killed, and those that survived, put forth their leaves late in the season. The apple and pear trees did not appear, the following summer, to be much injured, although the putting forth of their leaves, was somewhat retarded in the spring. The plum trees were apparently benefited by the salt water. Several kinds of currant bushes were badly washed by the water; one of them, the Missouri large fruited, had put forth its leaves, but they did not appear to suffer. A number of native shrubs and plants were submerged, but two only were destroyed, the *Staphylea*, and *Viburnum lantana*. A fine *Kolreuteria*, a Chinese tree, was not injured. The Strawberry plants did not suffer, but a bed of Spearmint, that by its spreading had become troublesome, was destroyed, whereas a bed of Peppermint escaped. The Crown Imperials and Narcisuses were six inches in height, when overtaken by the water. They never grew after this period, and exhibited weak flowers. All the weeds and grasses sustained no injury whatever. The Apple trees, washed by the tide, did not suffer so much from the canker worm as those not reached by the water. I could see no effect of the salt water upon the curculios. The earth worms were all destroyed, leaving their holes in the ground, as they were reached by the tide, and were driven by the waves to high water mark, where they laid dead in great numbers. The sea overflowed a garden in England, in November, 1824, and remained upon it for 24 hours. The result was, the improvement of the asparagus beds, and the cherry trees, in the following year, produced a numerous crop of cherries, which tasted, however, so very salt, they could not be eaten, although very fine in appearance. These trees all died the following year. An inundation of the sea occurred in Europe in 1825, when the oak, the mulberry, pear and some other trees did not suffer, neither did the asparagus, onions, celery, &c., for they were never finer, or more luxuriant. But the vines and gooseberries contracted a salt taste, and the apples, cherries, elms, poplars, willows, &c., pushed out a few leaves and soon died.

S. P. F.

Danvers, New Mills, Nov. 28th, 1851.

THE FARMER.

It does one's heart real good to see a merry, round faced farmer. So independent and yet so free from vanity and pride. So rich, and yet so industrious—so patient and persevering in his calling and yet so kind, sociable and obliging. There are a thousand noble traits about his character. He is generally hospitable—eat and drink with him, and he won't set a mark on you, and sweat it out of you with double compound interest, as some people I know will—you are welcome. He will do you a kindness without expecting a return by way of compensation—it is not so with every body. He is usually more honest and sincere, less disposed to deal in underhand cunning than many I could name. He gives society its best support; its firmest pillars that support the edifice of government; is the lord of nature. Look at him in his homespun and grey, laugh at him if you will, but believe me, he can laugh back again if he pleases.

☞ Those who speak without reflection often remember their own words afterwards with sorrow.

PRESERVE THE MUNICIPALITIES.

The permanency and stability of our Union depends, in a great measure, upon the independence and purity of our municipalities—our town and city governments. When these are corrupted, and become matters of "bargain and sale" by unprincipled men, seeking to elevate themselves by trampling upon the rights of the people, then, and not until then, shall we despair of the perpetuity of this glorious Union.

Their safety and purity are mainly in the hands of the rural population. It is to them that we are to look as the guardians of the public peace. While the ambitious in crowded cities, regardless of principle and good order, are swaying to and fro in angry surges for posts of honor or profit, the occupants of the rural districts will sit in calm judgment upon their actions, and hold a conservative power which will carry us safely through the storms of passion which must occasionally agitate our peaceful atmosphere. Princes and potentates shall rise and fall—despots and tyrants shall condemn, banish and execute their subjects, while whole nations shall be subjugated, lose their dearest rights, and labor in the unyielding chains of arbitrary rule, helpless and doomed to perpetual toil. But here shall our thousands of little Republics flourish. They are our bulwarks of safety. The tongue that would tamper with them should be palsied, and the hand withered that should aim the first blow at their foundations.

"Princes and lords may flourish and may fade;
A breath can make them, as a breath has made;
But a bold yeomanry, their country's pride,
When once destroyed, can never be supplied."

Fixed in the principles of the Pilgrim Fathers—constantly preserving at all hazard the inherent, natural rights with which we are endowed—bowing neither the head or knee to any but Him "who made us upright," let us watch with unceasing care, these little republics, these *Hearts* of the Union, our town governments, or municipalities. Keep them pure, suffer no prejudice to pervert them from the principles of justice and truth,—let them rest so easily upon each citizen that he shall scarcely be cognizant of their existence, and they will prove an effectual remedy for all internal dissension, and a better shield against all foreign aggression, than a Gibraltar of fortresses extending the whole length of our Atlantic coast.

We have been led into these thoughts from reading one of Kossuth's speeches—that wonderful man—raised up, as it seems clearly to us, to strike a blow at the despots of Europe which shall make them tremble from centre to circumference,—and may God help the right.

Austria attempted to interfere with the internal regulations of the Hungarian people, that is, what would be equivalent to an interference with our town and city regulations. The Hungarians resisted, knowing that if this outpost was surren-

dered, the citadel would be lost. It was in the glorious struggle to maintain these that they nobly fell. But

"Truth crushed to earth will rise again,
The eternal years of God are hers."

In explaining the cause of the struggle in one of his speeches, Kossuth said,—"For three centuries Austria has exercised open violence and wholesale threats to destroy the liberties of my countrymen, and were it not for her municipal institutions, would have succeeded. There was a time when the principles of liberty were spreading through Europe, and when I was myself almost alone standing against the assailants of Russia. Municipal institutions are the best protectors of liberty. There is the French nation, which has, after three revolutions, glory outside, but freedom within withering by the influence of centralization."

He then proceeded to observe that he foretold this would be fatal to them. England would always be great, glorious and free, by the preservation of her municipal institutions; and when he saw their race was the only one in both hemispheres enjoying perfect freedom, whether in kingly formed governments in the one, or in republican institutions in the other, he still saw it was by preserving these institutions intact.

For the New England Farmer.

MEADOW HAY AND CRANBERRIES.

BY SILAS BROWN.

Messrs. Editors:—Although meadow hay and cranberries bear no resemblance to each other, their affinity is such that they thrive in the same kind of soil and mingle together in society, and almost necessarily belong to the same subject for discussion. Experience is the best instructor; I have had as good an opportunity to discover the virtues of meadow hay as any man in the State. For more than 30 years I have had bountiful crops of it, some seasons more than I have been grateful for, ingratitude being my sin in this case.

I have flat meadow land inundated from fall to spring by a mill-pond. The wild grass and cranberry vines alternately occupy the whole lot with contending bushes which are steadily encroaching upon their territory unless care is taken to exterminate them. Where the cranberry vines grow, very little grass grows, but when they have gone through a course of bearing fruit they gradually decay, and finally rot and disappear, then the wild grass takes possession and has its turn and supplies us with meadow hay.

Cranberries do not produce well among grass, the berries are of small size and seldom ripen before harvest time; those are best which grow on beds that occupy the whole ground to the exclusion of grass; the berry grows larger and ripens better, not being shaded by grass and bushes and having the benefit of the sun. The seasons for several years past have been unfavorable to the growth of cranberries; the cold has continued later than formerly through the spring and into June, and the springs have been backward mostly for ten or more years. The late frosts in May, June and sometimes in July, have had a blighting

effect on the vines which for several years have lost their green thrifty appearance and look stunted and dingy. The cranberry vine, after the starting of the blossom shoots, is extremely sensitive, and meadow-land being more subject to frosts than upland, the vine is frequently injured when there is no appearance of frost on the upland. Meadow grass is much more liable to be injured by frosts than any of our varieties of English grass. I have frequently seen the crop nearly ruined by June frosts. Meadow grass makes much better hay cut early than late; the late cut hay is destitute of that flavor which is so agreeable to the smell, and cattle will only eat it as a "life preserver," as the famishing sailor eats his leather mittens. Meadow grass ought to be cut in July to be relished by the cattle; the little nutriment which it contains is soon dissipated to the winds if left standing later.

Cattle do not like to be confined to one kind of food any more than we do, and will eagerly eat it for a change if not repeated too often; they will winter very well upon it with a daily allowance of the different kinds of roots. I have found my young cattle, and oxen, when they do not labor hard, winter much better upon it than cows, and ought to consume a full share of the meadow hay; but cows must have good hay and other good food, and their flesh kept on their ribs during the winter, or it will be a summer's work for the poor brutes to restore it, beside a serious deficiency to the income of the owner by a diminished quantity of milk. I have seen the cows of some respectable farmers, in the spring of the year, which had been fed during the winter on meadow hay, and perhaps a scanty allowance at that, come out hide-bound in such a manner as to require the three summer months, in good pasture, to gain nourishment enough to loosen their skins from their ribs.

I have kept six or eight cows summer and winter for a number of years, and fed them in the winter on meadow hay, the refuse of corn, and sparingly on English hay; they would go dry three or four months, and come out in the spring, spry, but not burdened with flesh; their calves would be light at five weeks old, and fetch me 3 or 4 dollars each, and it would take all the best part of the grazing season for them to regain a "respectable appearance in the world," and be in a condition to give a decent quantity of milk. I have kept two cows, fed them with a supply of good hay, corn-fodder, pumpkins, the various kinds of roots, and a dose of swill occasionally, and they supplied us with milk every day through the year, and produced two calves worth 12 or 15 dollars at five weeks old, and wore a good loose hide, all the while unannoyed by blood-thirsty vermin. Those two cows while nursing their calves furnished us with milk and butter sufficient for a small family. Here we see the difference between feeding cows on nutritious articles of food and dry indifferent fodder. There is an advantage in having a constant supply of meadow hay in the barn as we have occasion for its use when our crops of English hay are cut off by drought.

We have reports at intervals of a few years, of short crops, famine and starvation among cattle in those places where farmers are dependent upon upland or English hay to winter their stock of animals; but in the regions of meadow hay in the county of Middlesex and elsewhere, it is very seldom we hear of farmers sustaining such losses ex-

cept through negligence in feeding. Firstly, the advantages of meadow hay are experienced in seasons of drought and scarcity of better fodder. Secondly, in requiring no labor to cultivate the crop. Thirdly, no expense for seed to perpetuate the crop. Fourthly, and no draught upon the compost heap to enrich the soil. Meadow-hay will preserve the lives of cattle through cold and dreary winters, as many of our experienced farmers can testify, but he that feeds his cows with it for main support must be contented with blue milk and a scanty supply at that.

The price averages here from 5 to 7 or 8 dollars a ton, or about the price of rye straw.

Wilmington, Dec. 1, 1851.

S. B.

HYDROPHOBIA.

A case of death from the bite of a mad dog at Banbridge, in Ireland, an account of which appears in a Dublin journal, induces us to publish the following from the last New York *Sun*. Of course we cannot tell whether the proposed cure would be efficacious or not, but the possibility of its being so, in such a dreadful emergency, is a sufficient reason for making it known.

CURE FOR HYDROPHOBIA.—Mr. James A. Hubbard, of Boone county, Illinois, in a letter to the St. Louis *Republican*, says:

"Eighteen years ago, my brother and myself were bitten by a mad dog. A sheep was also bitten at the same time. Among the many cures offered for the little boys, (we were then ten or twelve years old,) a friend suggested the following, which he said would cure the bite of a rattlesnake:

"Take the root of common upland ash, commonly called black ash; peel off the bark, and boil it to a strong decoction, of this drink freely. Whilst my father was preparing the above, the sheep spoken of began to be afflicted with hydrophobia. When it had become so fatigued from its distracted state as to be no longer able to stand, my father drenched it with a pint of the ash root ooze, hoping to ascertain whether he could depend upon it as a cure for his sons. Four hours after the drench had been given, to the astonishment of all, the animal got up and went quietly with the flock to graze. My brother and myself continued to take the medicine for eight or ten days—one gill three times a day. No effects of the dreadful poison were ever discovered on either of us. It has been used very successfully in snake bites to my knowledge."

TO PROMOTE THE HEALTH OF CATTLE.

Mix, occasionally, one part of salt with four, five or six parts of wood ashes, and give the mixture to different kinds of stock, summer and winter. It promotes their appetites, and tends to keep them in a healthy condition. It is said to be good against bots in horses, murrain in cattle, and rot in sheep.

Horse-radish root is valuable for cattle. It creates an appetite, and is good for various diseases. Some give it to any animal that is unwell. It is good for oxen troubled with the heat. If animals will not eat it voluntarily, cut it up fine and mix it with potatoes or meal.

Feed all animals regularly. They not only look for their food at the usual time, but the

stomach indicates the want at the stated period. Therefore feed morning, noon, and evening, as near the same time as possible.

Guard against the wide and injurious extremes of satiating with excess and starving with want. Food should be of a suitable quality, and proportioned to the growth and fattening of animals to their production in young and milk, and to their labor or exercise. Animals that labor need far more food, and that which is far more nutritious, than those that are idle.

Guard all descriptions of stock against cold and exposure, especially against cold storms of rain, sleet, and damp snow, and against lying out on the cold ground in cold nights, in the spring and fall.

In dry time, see that animals have a good supply of pure water. When the fountains are low, they drink the drainings of fountains, streams, and passages of water, which are unwholesome.

If barns and stables are very tight and warm, ventilate in mild weather, even in winter.

In feeding animals on apples or roots, begin with a small quantity and gradually increase it. It would be better to have all changes made gradually.—*American Vet.*

PICKLING MEAT.

Prof. Refinque denounces the use of saltpetre in brine intended for the preservation of flesh to be kept for food. That part of the saltpetre which is absorbed by the meat, he says, is nitric acid or aquafortis, a deadly poison. Animal flesh, previous to the addition of pickle, consists of gelatinous and fibrous substances, the former only possessing a nutritious virtue; the gelatine is destroyed by the chemical action of saltpetre, and, as the professor remarks, the meat becomes as different a substance from what it should be, as leather is from the raw hide before it is subjected to the process of tanning.

He ascribes to the pernicious effects of the chemical change all the diseases which are common to mariners and others who subsist principally upon salted meat—such as scurvy, sore gums, decayed teeth, ulcers, &c.—and advises a total abandonment of the use of saltpetre in the making of pickle for beef, pork, &c., the best substitute for which is, he says, sugar, a small quantity rendering the meat sweeter, more wholesome, and equally as durable.

REMARKS.—We fully agree with Prof. R. in denouncing the use of saltpetre in preserving our meats. Such poisons, and especially when they so nearly resemble common salt, or Glauber's salts, should never be brought into the midst of the family. The most fatal consequences have often resulted from it. Beside, the use of it does no good, and may do a great deal of harm.

Some persons have a practice of administering saltpetre to their cows once or twice a week, in order to keep off disease, or in their language to keep them healthy. This should be strongly reprehended. It is soon enough to dose either animals or humans when there are symptoms of sickness. The practice is undoubtedly a fruitful source of disease, as each dose of saltpetre contains nitric acid or aquafortis, which is a deadly poison.

For the New England Farmer.

A TALK ABOUT SHADE-TREES.

BY JOSEPH G. ROYT.

The propriety and pleasure of cultivating ornamental-trees both in private and in public, in winter as well as summer, you and I, Mr. Editor, have taken for granted so long that it seems to us, reclining "*sub tegmine fagi*," almost an insult to common sense to urge anything further on the subject. For myself I am a born Druid, and always look upon a tree with a feeling of old Celtic reverence. There is something in its graceful form, its living beauty, its overshadowing protection, its answering voice to every questioning wind, which seems to endow it, not only with the physical attributes, but with the intelligence of an exalted humanity. Whatever other skepticism I may have been guilty of, I never entertained an "unbelieving doubt," that Shakspeare found "tongues in trees," or that the priestesses of Epirus did receive from the sacred oak in Dodona the very prophecies which they proclaimed to the people. But if in these latter days of "noise and confusion," of clattering engines and "spiritual knockings," we cannot hear the small voice, nor understand the dialect of the "speaking oak," yet at least, to one who has eyes to see, the tree, whether bending under the green luxuriance of summer, or decked in the crimson glory of autumn, or defying in its naked strength the wintry tempest, is one of the most beautiful and majestic objects of nature. To praise it, as well as

"To throw a perfume on the violet,
Is wasteful and ridiculous excess."

In listening, therefore, to any eulogy upon the oak, or elm, or rock-maple, the initiated few feel very much as the old Greek poet, when with a sort of indignant impatience he said to the encomiast of Hercules—"who ever censured him?" Such undoubtedly is the feeling of you, metropolitan scribblers, who, with a true Eastern devotion, worship three times a day every green thing, from "the cedar-tree even unto the hyssop that springeth out of the wall."

But notwithstanding all this, there are unfortunately vandals yet in the outer world, or what is worse, willing slaves of mammon—men, who graduate everything on the scale of dollars and cents; men, who see no value in anything unless it may be converted into ready money or rail-road stock; men, on whose land a tree stands or falls according to the probable amount of moisture and manure which it takes from the soil, or the extent of shade which it flings over a potato patch. Show one of these bovine worshippers of the golden calf a maple, or a beech with its beautiful foliage,—and he will tell you that hard wood, if well cured, will fetch on the wharf \$7.50 per cord. Call his attention to a splendid landscape,—and he estimates its beauty and sublimity by its price per acre in the market. Bid him look at the majestic cataract,—and he sees not the rainbow which bends over it; for his eye is parcelling out the wild flood into streams of proper size for factories and grist-mills,—he hears not the awful anthem which it sings; for his ear is listening to the music of saws and wheels yet to be. Such men there are in the world, "'tis true; 'tis true, 'tis pity; and pity 'tis, 'tis true." One such, by the way, I unhappily know, not a thousand miles from this village—a man "of whom

the world is not worthy;" nor, indeed, do I now think of any place that is worthy of him. Pollok tells us that the slave of money, the gloating miser, with the power of an old habit fastened on him, would be a dangerous man in *heaven*—dangerous lest he strip the gold from the golden streets and the pearls from the jeweled gates. If this be true in any sense, as undoubtedly it is, how could he be considered a safe man *there*, who, in the light of open day, in sight of church-steeple and school-houses, would hew down a colonnade of nearly a hundred stately elms, the growth of half a century, the pride of the street, the admiration of every passer-by, because, forsooth, "*they capped the ground*" and would not bear cider apples! The most beautiful and attractive word ever employed in Holy Writ, as descriptive of *heaven*, is the word *paradise*—a garden full of trees. What would such a man, as the one to whom I have referred, do among those upper trees? Give identity of power, and, with his nature unchanged, his identity of character preserved, he would cut them into market length and smuggle them across the "fixed gulf," of which we read, to be sold for fuel on the other side!

I have no patience with such men or with the miserable philosophy which they act out in their daily life. We were made to be lovers of beauty as well as of money—with eyes as well as appetites—with souls as well as stomachs. Why does the brook run *winding* through the meadow, when it might have reached the ocean by a shorter, and therefore more *practical* and *economical* course? Why is the bird painted with parti-colored plumage, when it could have lived and died a dingy white? Why is its voice imbued with a melody sweet as the morning music of Memnon, when it might, like the earth-worm, have discharged all the functions of its social nature without a sound? "To what purpose is all this waste?"

But trees on a street before a house or house-lot are not without their advantages in a *pecuniary* point of view. They increase the merchantable value of real estate. There is, for instance, in this town, an estate, known as the "Judge Smith place," now owned by one of our best farmers, J. L. Cilley, Esq., which, surrounded as it is with magnificent trees, would, if it were for sale, bring to-day, in any civilized community, \$3000 more than it would if no shade-trees waved over it. Not only so, but it lends a charm to the whole neighborhood around. Every tree planted and raised is an investment, "*in perpetuum*," in an annuity office for the benefit of every citizen in the community and his descendants. The more beautiful a village is rendered, the more attractive it will be as a place of residence and the more valuable will property become in it.

Besides this pecuniary consideration, trees give a property a value which cannot be reckoned in dollars and cents. They gather around themselves a thousand associations—associations connected with all that is pleasant in our recollections of childhood and innocence and parental love. We respond from our "heart of hearts" to the song of "Woodman spare that tree." We would no sooner touch a single bough of the tree which sheltered our youth, than we would mutilate the face of a sleeping child, or disfigure the portrait of a friend in heaven. It is sacred to memory, and, though it may have been an unshapely pine, yet the old homestead would be a desert spot without it. Ev

ery sapling, which we plant on the naked street before our dwellings, makes, with every expanding leaf and spreading limb, home pleasanter and our attachments to it stronger. The saddest thing in the sad lament of Eve, when driven by the angel from Eden, was her apostrophe to the trees and flowers which she had reared "from the first opening bud"—trees and flowers,

"That never would in other climate grow."

If in New England the child is always to feel, that, under the influence of a "manifest destiny," he must leave the home of his father, we can at least so surround

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The quiet and phlegmatic Dutchman is a natural product of the level, monotonous Netherlands. The Switzer, with his bold, adventurous, and invulnerable spirit, is, in his character, a legible transcript—a daguerreotype of the peaks and glaciers and rugged beauty of the Alps. We may not be able to tell how this influence is exerted, but the fact we know and feel in our daily life and experience. How often does it happen, that a falling leaf, a faded flower, or a blooming landscape, has changed the whole current of our thoughts and our being! There has ever been more of divinity and divine instruction in the still small voices of nature, than in all the noisy harangues of the forum or wisdom of the schools. The hardened and the vicious may turn away their ear from the teachings of the fire-side and from the voice of the pulpit, but they cannot thus easily escape from the preaching of nature. Some strain of music from this over-arching cathedral, or some breath of incense from its thousand altars of worship, will reach them in their wanderings.

It is a law of our intellectual and moral being, that we grow into the likeness and character of the objects of our constant contemplation. We are, however, never susceptible of external influences, our imaginations are never so vivid, our habits of communing with nature in all her exhibitions of beauty or deformity are never so active as in the period of childhood and youth. Not a thing, animate or inanimate, is presented to the eye of the young, but enstamps itself upon their minds and hearts. Their every thought takes its hue and coloring from the objects which surround them. It is of some importance, therefore, in a moral point of view, that our school grounds should be something besides naked, glaring sand-banks, diversified, if diversified at all, with shapes of ugliness. If, as somebody somewhere says, (I do not remember who nor where) a man's progress in holiness of heart and life depends somewhat on the binding of the Bible and prayer-book from which he reads, how important is it that the leaves of the great volume of Nature, which our children read, not morning and evening, but always, should be pure on every page—that no blurred or blotched text should hide the meaning of the author—that no gross or

hideous picture should defile the imagination of the reader! We are material beings, and live in a material world, which is certain to affect us for good or ill, whether we will or not. The author of "Yeast" says no truer thing than this: "the spiritual cannot be intended to be perfected by ignoring or crushing the physical, unless God is a deceiver and his universe a self-contradiction." The moral which this truth teaches is nothing more nor less than this: when we have beautified our own dwellings with trees, we should remember the school-house, and not "lay down the shovel and the hoe" until we have made the play-grounds for our children there, such, in themselves and in all their associations, as shall inevitably tend to elevate and purify and ennoble human character.

It so happened, Mr. Editor, some two years ago, that, through the exertions of Henry F. French, Amos Tuck, J. S. Wells, C. J. Gilman, and a few other gentlemen, a public meeting was held in this town to discuss the importance of overshadowing our village with forest trees, on which occasion your humble servant, as well as others, made a speech. The result of our united efforts was the transplanting of about 2000 trees. In looking over some loose papers to-day, I fell upon the exceedingly meagre notes of that notable performance of mine. At the suggestion of a friend I have attempted to clothe these dry bones with flesh and to make them live in your embalming journal, not as the full-grown speech that was, but as the somewhat quaint essay that is. J. G. HOYT.

Exeter, Nov. 28, 1851.

SYSTEM—ORDER—REGULARITY.

The importance of attending to these points must be apparent to every one who has had any experience in managing a household, and who has the important and indispensable talent of observing. Supposing, then, my young friends to be early risers, your attention should be next directed towards having a system and regular time for everything you do. "There's a time to work, a time to sing, and a time to play," &c. According to your desires, necessities, or tastes, have your moments or hours set apart, and when once fixed, adhere to them, and make every other thing about the house adapt themselves accordingly. In this way you will soon have united and harmonious action, and everything go on like "clock work." You know always where to find yourself, and every one will know where to find you, and place their dependences and make their calculations accordingly. This is supposed that you are at the head of the establishment, for there must always be a head to a body. But, if you are not at the head, you can regulate according to that head, and, if there is a system about it, you are as much the governor of your time, as if you were the main regulator. If there is not system about it, I pity you from my heart; you are a slave indeed, and must have the patience of Job and the meekness of a lamb, if your temper is not ruffled. From all the scourges and distempers incident to the ills of human life, God save me from factions and disturbances of an irregular household. Behold the beautiful, grand and incomprehensible system of all nature, the sublime regularity of the heavenly universe; watch the harmony of system, and the beauty and regularity displayed by the Divine Regulator, and who will deny that we have not there an unmistakable example for us to follow!

*For the New England Farmer.***THE PLUM TREE—FROSTS.**

MR. BROWN:—Will you please clear up a difficulty for me?

In the "American Fruit Book," it is said, "The plum is usually most productive in hollows, and low, rich, moist soils, not being liable to kill in the bud, like the peach and apricot." Is it to be understood, that it is not liable to injury in the blossom from Spring frosts? (a.) I have searched many authors, but have arrived at no satisfactory conclusions on this point. My soil is low and frosty, where the peach succeeds very indifferently, and the apple is sometimes destroyed by frosts. If the plum is free from this drawback, I could enter upon its cultivation with great delight (b.) This tree I believe generally blossoms earlier than the apple and pear, which makes me distrust its hardiness. A little fruit is produced on the plum in this vicinity, it is impossible to tell whether frosts or curculios do the mischief in low situations. Jarring, I think effectual against the curculios; (c.) other remedies I have not seen tried.

Sterling, Ct.

G.

REMARKS.—(a.) The plum is more hardy than the peach, and of course, not so liable to be injured by the extremes of weather. It loves a deep, rich, and somewhat moist soil, while the peach, as a general thing, is productive on high ground, with a soil inclining to sand or gravel. In the town of Lincoln, in this State, where the peach crop is certain, and some of the finest are produced which come to this market, the soil is light, and sandy or gravelly, and they are usually cultivated on the hills. But if the soil of these hills were a deep rich sandy loam, there can be no doubt the crops produced would be more abundant, and perhaps of better flavor.

(b.) The plum will undoubtedly succeed better on the soil you describe, than the peach, so far as cold and frost are concerned. If you can avoid the curculio and black wart, we have no doubt you may cultivate the plum to advantage in the location you describe.

Much misapprehension prevails, we think, upon this question of injury to fruit trees, buds and blossoms, by frost. And this seems the more evident from the different views entertained in different locations. In this vicinity it is very generally believed if the mercury falls below 13° or 14° below zero, it is fatal to the peach. This may be correct—it would require a series of the most careful observations to set it down as a fixed fact. There are few persons so much interested in the subject as to give it the necessary time and attention at a season when the mercury is several degrees below zero.

It seems to us, however, that the difficulty arises, not so much from the intensity of the cold, as from the sudden extremes which take place, either in the fall or spring, when the ground is not frozen. These changes are sometimes very

great—being some 30° or 40° in the course of twenty-four hours. Genial suns and showers have set the sap in motion, the buds or blossoms are swollen and tender, having partially thrown off their winter dress, when the wind suddenly hauls into the northwest and rushes upon them with cutting sharpness in this unprotected state perhaps for one or two days. They become chilled, perhaps frozen, and the little black spot at their centre which may be found upon examination, is sufficient indication that their vitality is gone.

After the earth has taken a three or four months' repose, she wakes from her refreshing nap, and like a strong man who stands in the field ready for his labor as soon as the light from the east scatters the shades from his path, is ready to give new life and growth to the numberless plants which are waiting for her recuperative power. The sun's warm rays are received into her bosom, and vegetation begins its new existence. Grape-vines in a warm exposure will throw out tender shoots, and while thus courting the early warmth, will be overtaken by one of the sudden and extreme changes which we have mentioned above, be frozen, perhaps, or so chilled as to make a healthy recovery impossible.

These extremes being certain—for we believe they occur every year—it becomes us to seek some remedy against the injury they do us. In planting fruit-trees, this may be done in a considerable degree, by giving them a high, northern exposure. There, the heat would not affect them so much, and the extreme would not be so great. Vines and plants may be protected by matting hay or straw, as a very slight covering will in most cases preserve them.

(c.) Last season we raised a perfect crop of apricots. The curculio commenced puncturing them, but dry lime was sifted over the fruit and trees, and they ceased their mischief. The lime was applied several times; beside this a brood of chickens were fed under the trees. The curculio, however, was not so troublesome any where about here last year, as usual, so that what we have considered a remedy may fail hereafter.

ERRORS IN COMPOSTING FARM MANURES.

The farmer's manure heap is usually the receptacle for every substance that has served its original purpose; but it is a mistaken idea that everything thrown in there will serve a useful purpose. We may, however, just say here that this error has considerably influenced farm practice. Belief in the alchymy, rather than the chemistry of the farm-yard, has led some persons to cart soil into the manure yard, and to carry it back again with the dung to the very field from which it was taken; adding materially to the bulk and expense of the manuring. They presumed that they added to its value, but the effect of the earth upon the farm-yard manure would be merely to retard decompo-

sition, and thus might be a loss or a gain, according to the circumstances of the soil and the crop.

Animal substance, offal, and fish of every description, are also very unprofitably applied to farm-yard manure. The natural tendency of animal substances to enter into putrefactive fermentation is well known to be greater than that of vegetable substances. By placing them in the manure heap, we, in a farther degree, facilitate the quality in which they naturally excel, and the tendency of which is to rob them of their most valuable element, nitrogen. Judicious practice should avoid this error, by adopting, if possible, a system having an opposite effect.

Lime is one of the substances which it is also an error to use with composts in which we have farm-yard manure. It is equally an error to mix lime with any compound rich in ammonia. The tendency of lime, in all composts, is to promote decomposition and to waste nitrogen, which escapes by union with hydrogen, under the form of ammonia, which is the very treasure of the dung heap, and of most other manuring substances.—*Morton's Practical Agriculture.*

AGRICULTURAL BUREAU.

The President, in his annual message to Congress, strongly recommends the establishment of an Agricultural Bureau at Washington. The Secretary of the Interior joins in this recommendation, and thus enumerates the objects to be served by such a bureau, in his annual report. The proposed measure is one of great importance to the entire agricultural interest of the United States, and we hope it will receive that attention from Congress which it merits:

"The establishment of an Agricultural Bureau is again urged upon the attention of Congress. Agriculture is the great interest of our country, more than four-fifths of our population being engaged in it, and yet it is without a Bureau devoted to its interest, although recommended since the days of Washington.

"The best mode of illustrating the utility of an Agricultural Bureau is to present a condensed statement of the duties which it should be required to perform. It should be charged with the duty of collecting and disseminating information in regard to the cultivation of the soil, in all its branches. It should investigate every proposed improvement in the tillage of the earth, or in the construction of implements of husbandry. It should collect from our own and foreign countries every variety of seed, fruit, plant, and vegetable, and distribute them, with full and accurate information as to the soil, climate, and mode of cultivation best adapted to each.

"Through the agency of our national ships and merchant vessels, arrangements could be made for the importation of all the valuable vegetable productions and animals of other countries. This would enable us to appropriate to ourselves the results of the wisdom, experience and improvements of all the world in regard to agriculture, and we should soon be rendered independent of other countries for many articles which are now imported at great cost. One or more officers should be connected with it, thoroughly acquainted

with the principles of geology, mineralogy, chemistry and botany, for the purpose of investigating and reporting upon the character and properties of every variety of soil, rock, mineral and vegetable, and their adaptation to useful purposes.

"To this bureau should also be entrusted the duty of superintending the taking of each decennial census, and of procuring and classifying from year to year all the statistical information which can be obtained in respect to the agriculture, manufactures, commerce, tonnage, revenue expenditures, financial and banking systems, improvements by railways, canals and roads, industrial pursuits, and general progress of every State in the Union, and of the principal nations of the world. By this means a vast fund of useful knowledge, which cannot now be obtained, would be always accessible to Congress and the Executive.

"In this department of knowledge our government is behind England, France, Belgium, Prussia, Austria, Russia, Sweden, Spain, and other countries in Europe."

PERIOD OF GESTATION OF DOMESTIC ANIMALS.

It is often important for farmers to know the exact length of time that the different domestic animals go with their young. The following table contains the times of those which most concern him, as near as we can ascertain them:

Mare,	- - - - -	11 months.
Jennet,	- - - - -	11 "
Cow,	- - - - -	8 "
Goat,	- - - - -	4½ "
Ewe,	- - - - -	5 "
Sow,	- - - - -	4 "
Bitch,	- - - - -	2 "
Cat,	- - - - -	8 weeks.
Rabbit,	- - - - -	4½ "
Rat,	- - - - -	5½ "
Mouse,	- - - - -	4½ "
Guinea Pig,	- - - - -	3 "

Period of incubation of domestic fowls:

Swan,	- - - - -	6 weeks.
Turkey,	- - - - -	4 "
Goose,	- - - - -	4 "
Duck,	- - - - -	4 "
Pea Hen,	- - - - -	4 "
Guinea Hen,	- - - - -	3 "
Common Hen,	- - - - -	3 "
Pigeon,	- - - - -	2 "

Granite Farmer.

A WONDERFUL RASPBERRY BUSH.—We noticed in September last, the reception of some raspberries, from the second crop on the same bush, raised by Mr. P. B. Phillips, of Cranston. He then stated that the third crop was growing on the bush. On Saturday last, he brought to our office some of the berries which he assures us are from the *fourth set of blossoms during the present year!* The berries are not quite so large and rich flavored as those of the second crop, but they are about the average size, and ripe. He says the bush stands in the open garden, but he has taken considerable pains to keep it well cultivated, and the ground loose around it. It was taken wild from the woods, one year ago this month. Some parts of the bush have grown nine feet during the past season.—*Prov. Mirror, Nov. 10th.*

*For the New England Farmer.***INSECTS—ORCHARDS—HENS.**

BY WM. D. BROWN.

MR. BROWN:—I have just read over again Downing's article in the July Horticulturist, "A few words on Fruit Culture."

He says, "The multiplication of insects seems more rapid, if possible, than that of gardens or orchards in this country. Everywhere the culture of fruit appears the easiest possible matter, and so it would be, were it not for some insect pest that stands ready to destroy." This is true; and it is the greatest drawback the fruit culturist has to encounter.

I heard Professor Agassiz deliver a lecture upon injurious insects, a few weeks since. He says that there is a great deficiency of accurate knowledge yet on the subject. He urged that the pupils in our common schools might be profitably instructed concerning injurious insects. He would have specimens for the teachers to exhibit and describe.

I am no advocate for any further addition to the numerous studies already pursued in our schools, but this suggestion of Professor Agassiz seemed eminently practical. A little attention on the part of the teacher would enable him to point out occasionally to his elder pupils much that would aid them in checking the ravages of these enemies. He might train their eyes to look over a young orchard after the fall of the leaf, or before the buds opened in spring, to detect the glazed clusters of caterpillars, all ready to swell up into devouring colonies. He should tell them that every "nest," which appeared afterwards, should be demolished early in the season and early in the day. I would have him almost eloquent upon the folly—yes, worse than that—upon the criminality of allowing those nests to mature.

I recollect well the pleasure with which I looked upon a long row of apple trees in a neighboring town, some years ago. A few years after, I saw those trees again. Some were almost white with caterpillar's nests, and barren enough of leaves for pigeon stands. The owner, it seemed, had abandoned them to the worms. I thought before I would do so, I would serve them as you know the Dutchman did his grain-stacks, to rid them of the pesky rats—set them on fire!

I was in a store in this town, once, when a worthy citizen entered and said, "What's Mr. —'s first name?"

"My good sir," said the clerk, "can't you see it on his sign?"

"O! I beg your pardon," replied the old gentleman, "I never look so high as that."

Now if the caterpillars should happen to get into his orchard, wouldn't they have a "time?"

I think, sir, the swarming myriads of insects demand our utmost vigilance. It won't do for a man to walk among his trees without his "head up," high enough, too, to see any "sign" of unprofitable marauders.

It is a generally admitted fact that insects, such as often prey on apple trees, derive important "aid and comfort" from the ground about the trunk. Their propagation and concealment is assisted by an annual deposit of unadulterated stable manure. Now if the ground were to be cultivated over the whole orchard, and the manure applied broadcast, the hens and chickens would destroy a multitude of

insects during the summer. Hens and swine have been confined under plum trees with excellent success. No other course, has, as yet, troubled the curculios very much.

If the orchard is near home, and it is worth most there, the hens will enjoy their daily search under the trees. If the ground is cultivated, and kept mellow, you will have the full benefit of their investigations.

About three years ago, I began to keep hens in my nursery. Whenever the cultivator or plow was started, the fowls were found in the wake, and the way they raked out the worms would surprise one not accustomed to the sight. I have seen a hen ("with yellow legs") swallow sixty-one grubs in an hour. I would not undertake to get through a single summer without my hens and chickens among the young, as well as old trees.

Downing recommends bonfires on June evenings to destroy the millers. I generally give them the full benefit of my collected trimmings. The blaze sometimes scorches their wings, but the hens take wings, legs, bodies and all.

You see, sir, I don't believe in keeping the poultry upon the doorstep. Just give the hens a chance to scratch, and, if they are anything near the good old native breed for enterprise, depend upon it the legs will fly. Respectfully yours, W. D. B.

Concord, Mass., Dec. 5, 1851.

HEAVES IN HOSES.

It has often been remarked to us that the disease in horses called "heaves" is more prevalent now than it was formerly. We cannot say whether it is a fact that there are more horses troubled with this disorder than there used to be, or whether, as there are more horses now in existence, there are consequently more seen troubled in this way, while the comparative number of diseased ones may be the same. We have never been fully satisfied in regard to the real cause of this disease, or the real seat of it. Every one, however, can soon distinguish the symptoms. It consists in a difficulty of breathing,—the flanks or respiratory muscles seem to do the whole work, and that, too, very laboriously. The air is drawn into the lungs when the muscles at the flanks begin to draw in as if pushing out the breath, and after pressing in with a good deal of action, they drop suddenly as if a catch or spring had let go of them, and they fall by their own weight. There is also a dry hacking cough attending the disease, and on driving the horse quick, the cough is often excited, and this laborious breathing is brought on very severely. This would seem to fix the seat of the disease in the lungs. We have noticed, however, that *heavey* horses, as they are called, are generally enormous eaters, and if suffered to eat as much as they want, will fill their stomachs to a most uncomfortable extent, and when thus distended, are much worse troubled than when sparingly fed. Many causes have been alleged as producing this prevalence—such as feeding more freely on clover hay than formerly—dusty hay, caused by the smother of the modern horse-power threshing-machine, in barns where hay is kept, &c. &c. It would seem, from the fact of an increased or morbid appetite in the horse, that the stomach has also taken on diseased action.

Various remedies have been proposed, and some of them relieve or palliate the disease for a time.

We believe that care and attention in feeding is of great consequence. Don't let him fill his stomach too full with dry food. Let his food be moist, and of a nature that contains much nourishment in small bulk. You do not find heavy horses troubled much with this complaint while they are at grass. Then let their food approximate as near to the condition of grass as you can. Cut the hay—wet it, and sprinkle on meal.

A writer in a recent number of the Rural New Yorker, (J. Libbey, of Eagle Harbor, N. Y.,) speaking of this disease, attributes it to feeding on clover hay that has become dusty in consequence of being badly cured. He says he treated a horse that he owned, and that had the heaves, in the following manner: He took the hay entirely away from him, and fed him with straw, mill feed, (shorts, &c., we suppose,) and grain. He thinks if he had cut the straw and wet it with oat or corn meal, it would have been better; but as it was the heaves did not trouble him much.

Those who have good horses that are troubled with heaves—and most heavy horses are those which are naturally most strong and active—should furnish themselves with a straw-cutter and a mush-tub, and give them cut and moistened feed. They will thus not only keep their horse more economically, but will improve his health and keep him in a comfortable condition for any kind of labor.—*Maine Farmer.*

BEAUTIFUL EXTRACT.

Do trees talk? Have they no leafy lungs—do they not at sunrise, when the winds blow, and the birds are carolling their songs, play a sweet music? Who has ever heard the soft whisper of the green leaves in spring time, on a sunny morning, who did not feel as though rainbow gleams of gladness were running through his heart? And then when the peach blossoms hung like rubies from the stem of the parent tree—when the morning glory like a nun before the shrine of God, unfolds her beautiful face, and the moss roses open their crimson lips, sparkling with the nectar that falls from heaven, who does not bless his Maker?

REMARKS.—It would be agreeable to us to give credit to the author of the above beautiful paragraph, if we knew to whom it belongs. The observations required in order to write it must have been close; and although they were made among the loveliest things of earth, and afforded the observer enjoyments which military chieftains and ambitious worldlings rarely feel, they ought to be accompanied by his name, and go towards making up his fame. We are constantly surrounded by these interesting phenomena. The closer we study them, the greater will be our enjoyment, and the more shall we abound in gratitude, that we are made capable of seeking out and appreciating them.

APPLES FOR STOCK.—A gentleman informed us the other day that having a heap of refuse apples, many of them being rotten, he fed a peck each to a stock of fifteen cows, and that the next morning their mess of milk was increased eight quarts.

This experiment in connection with observations he had made had thoroughly satisfied him that apples are highly beneficial to any stock. He thinks they can be raised with profit for this purpose. His judgment is worth something, for he is a large apple producer.

For the New England Farmer.

THE NORTH STOCKBRIDGE FARMERS' CLUB.

BY W. BACON.

MESSRS. EDITORS:—It is but a few years, not more than four or five, since an institution bearing the above name was founded by a few individuals in the neighboring towns of Lenox and Stockbridge. Among its early founders were some of the most learned and enterprising men of the former town, who make it a regular practice to attend its stated meetings, and communicate with those more directly concerned in the cultivation of the soil, upon the best method of carrying out the principles of agricultural improvement.

As is usual, in all such cases, many of the farmers at the beginning thought the whole affair a useless innovation,—a something got up by the lawyer and the doctor to secure their own popularity, and for their part did not wish to go where these fellows were, to hear them "talk about book farming and all that kind of stuff." They were brought up on the farm and knew all about it. Other farmers thought the plan a good one at the outset, and opened their doors for the meetings of the Club, and their hearts to give and receive the lessons of experience it was calculated to elicit. As a matter of course, the more of these meetings such individuals attended, the more interest they found in them, and the more interest, the more they were talked about when they met other farmers, and other farmers said that a spirit of inquiry was going on which was likely to elicit new facts in regard to the better management of the farm, and they, too, must be interested in the matter and join the club.

As the result of its progress and triumph, we have now only to refer to the report of its (THE NORTH STOCKBRIDGE AND LENOX FARMERS' CLUB) second Cattle Show and Fair recently held at Lenox, which says, "The number of cattle exhibited was 216. Besides these, it appears there were horses, sheep, swine and poultry,—domestic manufactures,—the products of the dairy, the orchard and the garden in nameless, and for ought we know, innumerable quantities."

No premiums were awarded except the meed of honest praise, which was bestowed in the ratio which the several subjects on exhibition warranted, so that no one was stimulated to exertion through the hope of obtaining a silver cup or a set of spoons, but simply by a laudable ambition to excel, and no one was under necessity of contributing from his funds, to raise an amount to be paid in awards to those more successful than himself.

After the examination by the several committees was closed, the club, numbering more than one hundred, took a dinner got up for the occasion, where ladies as well as gentlemen met to do honor to the festive board. After which an address was given by the president, and the party separated, no doubt happier, wiser and more in love with their

profession and their fellow-men for this day's festivities.

We have made the farmers' club a topic of this communication, because we have long thought that such institutions may be productive of a more general advancement of agricultural progress and of social intercourse among all our farmers.

We have introduced this farmers' club, because we have known its progress from the commencement, and it is just such a light shining here, where its brilliancy gladdens our eyes, as we wish to hold up before the agricultural world, and say, as we exhibit its brilliancy from our right hand to every town where our sayings may be read, "go thou and do likewise." Do not, gentle reader, if your patience has permitted you to follow us thus far, throw down the paper, with the exclamation, "it may be a good thing, but we can't make a thing of that sort go here, so it is no use to try;" but commence, though at first you may have no one but your next door neighbor to commence with you, and make a matter-of-fact business of it, and our prediction for it, your number will soon increase. Have not the time! What a foolish idea, with all the long evenings which must necessarily pass between now and the 20th of March, to suppose that you cannot visit your friends and neighbors once in two weeks to discuss some subject of practical utility to each of you. And supposing you do now know pretty much all that is to be known about the farm, the garden (O! I'm sorry that's so odious a word with many farmers) and the orchard, you may have the blessed privilege of enlightening others, and therefore making their labor lighter, and perhaps add a few new ideas to scatter gladness in your path.

Come, then, in every community where no such organization exists, let one commence, and however feeble may be its origin, let it go forward. The progress of the age, and more than that, that of the profession, in which every farmer should pride himself, demands that every means which can bear upon the advancement of agriculture, should be brought into action to effect the object. Knowledge is the great lever which is to accomplish wondrous things in increasing the fertility of the earth. It is sure to be so, for its movements are always visible beyond mistake. Let every farmer lay his hands firmly upon this lever, and its effect will become more efficient and more active.

We may, circumstances permitting, at some other time, allude to other ways of advancing agricultural knowledge; but to-night our business is with the farmers' club, and we urge our appeal in its behalf, because it is a means of which every farmer and every farmer's son may at once, without money and without price, avail himself. It is only to meet your neighbors, as we have already said, once in one, two or three weeks, as you see best, and exchange the knowledge you have gained by experience, for theirs. How cheap and yet how valuable it may prove. What queries may be raised and how many inquiries may be excited by the operation, we don't know and don't care. A spirit of investigation will probably be aroused, which, if properly nourished, will not be satisfied with the aliment it receives at the club-room, but it will go to the press and to the school-room, and eventually to the farmers' institute, for large draughts of wisdom and knowledge than the humble fountains where its slakings were first attempt-

ed can supply. And then, when the farmer employs practice for the line and knowledge for the plummet to regulate his movements, the golden age of agriculture will commence, and labor well directed, bringing abundant harvest to gladden the hearts of all, from spots now blushing in sterility, will cause grateful hearts and wise heads to bless the day when farmers' clubs were scattered like tall beacons of light over the land. W. B.

Dec. 1, 1851.

For the New England Farmer.

BLOODY MILK.

MR. EDITOR:—In looking over your last No., (Nov. 8,) I observe the trouble of your correspondent, J. E. Upham, and your perplexity to satisfy his queries, with your request for light on the subject. Without pretending to an "acquaintance with the physiology of the cow," or the proper term for the disease, causing his cow to give "bloody milk," I will state a simple remedy, which I have always found efficacious under similar circumstances, viz:

When one of my cows is affected, I procure a root of the *Phytolacca* (Poke) plant, which I presume grows wild with you. Of this I cut up finely five to six ounces, and mix with the food. I repeat this, if once does not effect a cure.

Truly yours, A. H. ERNST.

Spring Garden, Cincinnati, Nov. 24.

REMARKS.—A gentleman who keeps a stock of sixty to seventy cows, recently informed us that he had lost in cows and milk equal to \$500 by the disease called garget, some one or more among his cows constantly giving bloody milk. We give the remedy of our correspondent, as above, only remarking, that we should suppose one-tenth part of the amount he prescribes would be as efficacious in arresting the disease, as "five or six ounces." It is not the amount of medicine administered, but whether that medicine is a *specific* for the disease. To prescribe understandingly, we first ought to know how, and what organs are affected; and until we do know this, we should "shudder to destroy life, either by the naked knife, or by the surer and safer medium of empiricism."

DISCOVERY OF NEW FARMS.

Lawyers have known for a long time, that a land-holder owned ever so far down below the surface. But farmers never have seemed to suspect, that their deeds gave them a right to more than six inches of the surface. Nobody hardly has thought of looking deeper than that, except the diggers for gold and water. We have all heard of the classics being covered all over by the prosy homilies of the monks of the Middle Ages; in consequence of which generations have been content with the comparatively worthless surface of their parchments, in ignorance of the rich deposits beneath. Our agriculturists have had a similar experience till now, when the sub-soil plow is revealing to them treasures before unknown. Discoveries in the earth are keeping pace now with those in the sky, and a new earth is open to the cultivator, as a new heaven is to the astronomer.

The following conversation at the Farmers' Club, out from the *Rural New-Yorker*, brings some intelligence of the news:

DR. UNDERHILL.—I omitted speaking of another great source of phosphate of lime, and that is one which some few farmers have hit upon. I mean that part of the farm which lies six inches deeper under the farm. There, since the deluge, lies undisturbed the fertilizer usually hard. Roots of the grains and annuals cannot penetrate it. There it is and has been accumulating for thousands of years, insoluble, except when roots apply themselves to it. Not one farmer in ten ever plows deeper than five inches. The roots cannot get at the mine below—it is too hard. He cannot afford to buy guano or bone; but he can afford a sub-soil plow. Let him go down fifteen inches into his good farm below, and he may have a new farm good for fifteen years to come.

I never thought until, this year, that my loose sandy, gravelly land wanted sub-soiling. It is so very loose that one almost wades in it. But nevertheless, this year I have sub-soiled 12 to 14 inches deep, and my corn on that tillage has given me a *double crop*. I found the bottom of my very loose top soil had packed; the annual plants could not put their roots through it. My double crop has succeeded in spite of a pretty severe drought. I have for many years always plowed to the depth of from eight to ten inches, but this year I have resorted to the farm which lies under mine successfully.

DR. CHURCH.—Is it necessary to sub-soil every year?

DR. UNDERHILL.—I think not; but I mean to sub-soil every acre I cultivate at all. It operates, also, as a drainer. It also receives the fertilizer from the atmosphere. The first store of manure is our earth; the second is our atmosphere. That from the latter enters the earth by means of dew and rains—by dew even in times of drought—when a deep-tilled soil can take it up, while a shallow one cannot. Up to this day the shallow work prevails. Nineteen out of twenty farms are so abused. A farmer who can neither buy books nor attend Farmers' Clubs, can nevertheless plow deep.—Let him try it, and if he fails, let him come to this Club and tell us so!

LONG MANURE.

Vegetable and animal matters, when brought into a state of fermentation by the agency of air, heat, and moisture, immediately give off carbonic acid gas, which, if confined beneath the surface of the soil, will become mixed with the moisture there, and be taken up by the roots of plants. And what is carbonic acid gas? It is composed of two parts of oxygen, a constituent of atmospheric air, and one part of carbon, the principal constituent of plants, rendered volatile by the heat of fermentation. It is the digested food of plants; it becomes incorporated with water in the soil, is taken up by the spongioles or roots of plants; transmitted through the sap vessels to the leaves; is there decomposed by the sun's rays; the oxygen passes into the atmosphere; the carbon passes down through another set of vessels, and being gradually disengaged from the water which conveys it, by evaporation, it becomes a solid substance of the plant. Carbon constitutes principally the structure of the stems, branches, and roots of plants,

and it can only find access into plants in a fluid state, combined with oxygen. From this view of the matter, the reader will understand why we recommend long manure for hoed autumnal ripening crops, and that why we insist that one half of the value of cattle dung is lost by suffering it to be reduced to the condition of short muck before it is buried in the soil. All vegetable matters contain more or less carbon; and carbonic acid gas is invariably produced in the fermenting and putrefying processes.—*Genesee Farmer*.

WASTE OF MANURE.

Little or no pains is taken usually to save the liquid manure of animals; no earth or saw dust is placed in or beneath the stable to absorb it, and the barn-yard is often so situated that all the liquids that would collect in it, run off into the road, or are conducted to the adjoining field, where they are so little spread about, as to injure the crop by producing an immoderate luxuriance. Liquid manure is exceedingly valuable, and the yards and stables of the farmer should be so constructed, that it may all be saved. There should be no outlet to the barn-yard, where the fluids collected in it can run off. They should either be taken in and applied directly to the land, or poured upon the compost heaps in and around the barn-yard. The turf about his fences and stone walls or the mud and muck from his swamps, should be collected in heaps or spread around his yards in order to absorb the fertilizing liquids collected there.

INTERESTING EXPERIMENT.

If the following, from the London Times, be true, our geological correctors of Moses' cosmogony will have need to correct some of their dates, to say the least:—

Professor Gorini, who is professor of natural history at the University of Lodi, made recently, before a circle of private friends, a remarkable experiment illustrative of his theory as to the formation of mountains. He melts some substances, known only to himself, in a vessel, and allows the liquid to cool. At first it presents an even surface; but a portion continues to ooze up from beneath, and gradually elevations are formed, until at length ranges and chains of hills are formed, exactly corresponding in shape with those which are found on the earth. Even to the stratification the resemblance is complete, and M. Gorini can produce on a small scale the phenomena of volcanoes and earthquakes. He contends, therefore, that the inequalities on the face of the globe are the result of certain materials, first reduced by the application of heat to a liquid state, and then allowed gradually to consolidate.

AN EXPENSIVE FEMALE.—An economist the other day observed a lady who carried one day's labor of two thousand men upon her shoulders, and that of as many more hanging from her ears. There was not a limb in her body which did not call for the hard work of an entire day of one hundred men or women; and if it were usual to adorn the person with gold, like a Chinese pagoda, instead of silks and furs and textures of lace and wool, what was expended on her dress would have plated her all over with the precious metal.

PATENT OFFICE REPORTS.

In a brief notice of this document in a former number of the Farmer, we had barely time to express our vexation that the mechanical execution of the work is so miserable. We trust that the character of this country, abroad, will not be estimated by this part of the government work. We should be sorry to see so poor a specimen of American printing, binding and paper-making, *away from home*. Having relieved our mind on this point, we are prepared to say something, less in a fault-finding humor.

And first, we feel thankful that Agriculture has, at last, been thought worthy of some attention by the government. Washington thought the subject, in his day, called earnestly for the aid of legislation. President Fillmore, in his recent message, calls upon Congress to establish a Bureau of Agriculture. How far the general government should go—precisely what measures should be adopted, to aid the branch of industry which occupies four-fifths of our whole population, we will not now undertake to say—not far enough, at all events, to raise any questions of a political character.

To the establishment of some system, by which the agricultural wealth and resources of the country may be ascertained—by which knowledge of the best modes of husbandry of the various crops may be disseminated, and by which the *statistics* of Agriculture may be collected—no objection can be urged.

No man can attentively examine the report before us without being struck with the importance of some such system. A very small amount has been appropriated for the purpose, and we are informed, not a single dollar has been paid for contributions to the report, and yet by the communications voluntarily furnished, a mass of valuable information has been collected, which can be found no where else. The want of some central point where interesting agricultural facts and theories may be collected and compared, has long been felt. In several States, attempts have been made to establish agricultural schools, but as yet, no single school has been established in the United States. In New York, the subject for thirty years has been before the legislature, but without success, and in Massachusetts, where *education* in all other branches has received so much attention, no great favor has yet been shown to *agricultural* education. At page 145 of the Report may be found an interesting article on this subject, principally from the report of Hon. M. P. WILDER.

An article by Daniel Lee, M. D., upon "The Study of Soils," occupies about sixty pages of the report, and is worthy of its conspicuous position. Then follow treatises upon Fruit Culture—Wheat—Neat Cattle—Manure and Sheep Husbandry, with numerous communications upon miscellaneous subjects.

A comparison of the expense of raising the various crops in the several States of the Union, and of the costs of rearing domestic animals, affords some curious results. While, for instance, in Massachusetts, it cost about twenty-five dollars to rear a calf till it is three years old, in Wisconsin it costs but *eight*, and in Texas *nothing* but the expense of marking them, to raise a whole drove of cattle!

But we find it impossible to glance even at the contents of this report. Defective as it is in execution and arrangement, it is still of great value to the farmer for its practical details—and to the cause of agriculture generally, for the evidence it affords of the value of systematic effort in gaining accurate knowledge.

The great obstacle in the way of the advancement of agricultural science, is the inability of farmers to *compare their results*. The same experiment is tried a thousand times, and no results are published, when perhaps the whole matter might be set at rest by a single course of experiments, carefully conducted by competent men, were the facts made known. Some remedy for this evil must be devised. Whether it shall be an Agricultural Bureau at Washington, or Agricultural Colleges founded by State legislation, or by both in concert, or whether it should be left to the voluntary association of those interested in the cause, are open questions. One thing is certain, the farmers of the country are beginning to understand and assert their rights.

The end in view will be, ere long, attained, and we will conclude our rambling remarks by a word of advice to political men. If you intend to maintain a quiet conscience, and *keep with the majority*, be careful not to vote against the interests of agriculture!

For the New England Farmer.

LABOR NECESSARY TO HEALTH AND HAPPINESS.

BY A. TODD.

It is an undeniable fact that no class of mankind enjoy so good health, or possess such an amount of real happiness, as the working class. The man who earns his bread by the sweat of his brow, is the best calculated to live in the enjoyment of that health and happiness which make his journey through life pleasant and cheerful. The Creator has so constituted man, that it is as necessary for him to labor, in order to enjoy health and happiness, as it is to have refreshing rains to give life and nourishment to vegetation. Man was never designed for a life of inactivity and consequent ease; and that individual who seeks for happiness and contentment in the lap of ease and indolence, must ever expect to be perplexed and troubled in body and mind.

It is impossible for an individual to live in the enjoyment of health without engaging in some sort of labor, whereby he can exercise himself bodily and mentally; because it would be contrary to the laws of nature to have a man in full possession of bodily health without it. And it is impossible,

too, for a man to attain to any important or elevated station in society without devoting some part of his time to the exercise of his body and mind. Hardly a great man can be pointed to, who has not, in the early part of his career, labored with his hands and made himself hale and robust by the exercise of his bodily powers.

There is no business so well calculated to fit a man for the enjoyment of that happiness attendant on domestic life, as the cultivation of the soil. And there is no business that gives such health to the body, and soundness of mind, as this. In my opinion, the farmer's life is the happiest life a man can live. But as I have said, *labor is necessary to the health and happiness of mankind*. The importance of labor is too little thought of, and what is still worse, the idea is too prevalent that to labor with one's hands is disgraceful. But the Almighty, in His wise arrangement, has said that he who will not work shall not eat. To those who think it is disgraceful to labor, let me point them to some of our greatest and most learned men, as examples. When Washington, whose fame is world-wide, first received the news of his election to the presidency of the United States, he was following the plow in his fields. Daniel Webster, whose name is familiar with every school-boy, was born in a log cabin among the granite hills of New Hampshire,—and here his noble mind expanded while tilling the earth. Henry Clay was once a poor boy, and knew what it was to labor; and what school-boy cannot tell what business Elihu Burritt followed while pursuing his studies; hence it is evident that if our greatest men, by laboring from the rising to the setting sun, have won for themselves laurels of fame, it is not *disgraceful* to labor. Then let me utter in the ears of those who desire a happy and contented life, and who wish to enjoy a peaceful mind, to engage in some sort of daily labor; for to be engaged in *honest* labor is manly and noble; and "for six thousand years God has been uttering it in human ears, that he who will not work, shall not enjoy."

Smithfield, R. I., Dec., 1851.

A. T.

ENGLISH LUXURIOUSNESS.

Few of us whose lives are passed in republican simplicity, have any definite idea of the amount of wealth and splendor that surrounds many of the English nobles in their princely residences. An intelligent American, writing from England, describes some of these things.

The Earl of Spencer's homestead, about 60 miles from London, comprises ten thousand acres, tastefully divided into parks, meadows, pastures, woods and gardens. His library, called the finest private library in the world, contains fifty thousand volumes. Extensive and elegant stables, green-houses and conservatories, game-keeper's house, dairy-house, dog-kennels, porter's lodge, and farm-houses without number, go to complete the establishment. Hundreds of sheep and cattle graze in the parks about the house.

The Duke of Richmond's home farm, at Goodwood, 60 miles from London, consists of twenty-three thousand acres, or over thirty-five square miles. And this is in crowded England, which has a population of 16,000,000, and an area of only 50,000 square miles, or just 32,000,000 of acres, giving, were the land equally divided, but two

acres to each inhabitant. The residence of the duke is a perfect palace. One extensive hall is covered with yellow silk and pictures in the richest and most costly tapestry. The dishes and plates upon the table are all of porcelain, silver and gold. Twenty-five race horses stand in the stable, each being assigned to the care of a special groom. A grotto near the house, the ladies spent six years in adorning. An aviary is supplied with almost every variety of rare and elegant birds. Large herds of cattle, sheep, and deer, are spread over the immense lawns.

The Duke of Devonshire's place, at Chatsworth, is said to exceed in magnificence any other in the kingdom. The income of the duke is one million of dollars a year, and he is said to spend it all. In the grounds about his house, are kept four hundred head of cattle and fourteen hundred deer. The kitchen garden contains twelve acres, and is filled with almost every species of fruit and vegetables. A vast *arboretum* connected with the establishment is designed to contain a sample of every tree that grows. There is also a glass conservatory 387 feet in length, 112 in breadth, 67 in height, covered by 76,000 square feet of glass, and warmed by seven miles of pipes conveying hot water. One plant was obtained from India by a special messenger, and is valued at \$10,000. One of the fountains near the house plays 276 feet high, said to be the highest jet in the world. Chatsworth contains 3500 acres, but the duke owns ninety-six thousand acres in the county of Derbyshire. Within the entire is one vast scene of paintings, sculpture, mosaic work, carved wainscoting, and all the elegancies and luxuries within the reach of almost boundless wealth and highly refined taste.—*Exeter News Letter*.

RED SNOW.

A correspondent of the "Rochester Democrat" thus remarks upon the red snow found in the Arctic regions by the Rescue and Advance:

"How many new things excite the wonder of this age. The red snow was known on the Alps more than 2,000 years ago. Pliny mentions it in his history. Agassiz found it in abundance on the glaciers of the Alps a few years ago. He says that at the height of 7,000 feet above the level of the sea, there has long been on the snow of the Alps red snow a few inches deep and miles in circuit. It is on the surface of the common snow. It depends on a microscopic plant, a lichen, with some animal infusoria. Agassiz states that at 9,000 feet ten kinds of plants, infusoria and some crustacea, have been found, and that these give a deep red color to the snow. As this substance grows finely in such an elevated position, and in a temperature below the freezing point, it is not strange that a temperature of 40 or 60 degrees should dissolve it and the infusoria and crustacea, and tinge the water with deep red, or that such should be the composition that it can be preserved for a considerable time. The substance may not easily take on chemical action.

Deal gently with those who stray. Draw back by love and persuasion. A kiss is worth a thousand kicks. A kind word is more valuable to the lost than a mine of gold. Think of this and be on your guard, ye who would chase to the grave an erring brother.

BLACK TARTAREAN CHERRY.

The above beautiful portrait was drawn and engraved expressly for our columns.

The Black Tartarean is a favorite everywhere, and Mr. Downing says that in "size, flavor and productiveness, it has no superior among black cherries. It is a Russian and West Asian variety, introduced into England about 1796, and brought thence to this country about twenty years ago. It is remarkable for its rapid, vigorous growth, large leaves and the erect habit of its head. The fruit ripens about the middle of June, a few days after the Mayduke.

"Fruit of the largest size, heart-shaped, (sometimes rather obtuse,) irregular and uneven on the surface. Skin glossy, bright purplish black. Flesh purplish, thick, (the stone being quite small,) half tender, and juicy. Flesh very tender and delicious!"

There are several advantages in cultivating the cherry. The tree itself is highly ornamental, it puts forth early in spring, and is covered with clusters of snow-white blossoms. The fruit is wholesome and is in demand in the market. It is easily cultivated, and produces one of the earliest and best fruits for pies or the dessert.

☞ A year of pleasure passes like a floating breeze—but a moment of misfortune seems an age of pain.

FARM WORK FOR JANUARY.

Short, cold days, and long and colder nights, now have their turn in the varied year. The animals which are our servants, and to whom we look for both pleasure and profit, now demand our especial care. They not only require food and shelter, but good nutritious food, and such a degree of warmth as will enable them to remain in their stalls in a quiet and comfortable manner. Without these they will do you no credit as a skillful manager, and yield no profit in the stock department of your farm operations. Well protected, then, so as to be comfortable ourselves, let us take a look at one of our most valuable animals, the kind and patient Cow. Milk, one of the most wholesome and nutritious articles of food that we possess, has come to be an important item of trade in all the large cities. The amount consumed has been wonderfully increased within a few years. It has become a common article of food among many thousands who never have enjoyed this luxury before. It is called for at the tables of the public hotels, and at the common eating-houses, almost as freely as for "roast beef." Consequently the price of good cows has increased in a corresponding ratio, and they have become one of the most expensive, as well as profitable, part of the farmer's stock.

It is hardly worth while to feed meadow hay to milch cows, as it will not supply the heavy draught made upon them while yielding eight or ten quarts

of milk a day. Let that cheap fodder go to the young cattle, or the hardy oxen, for their first foddering in the morning and their last at night, during the sharp and frosty weather. With the milch cows, a full and generous supply of milk depends entirely upon a full and generous supply of the right kind of fodder. For this purpose, carrots among the roots stand pre-eminent, if richness, rather than quantity is desired. The various kinds of turnips, beets, and parsnips, are good, especially the latter root, and fed with dry fodder, keep the animals healthy and yielding a full flow of milk.

Cows should always be treated with gentleness, not exposed to sudden extremes by being turned from the barn to a bleak place to drink, where the sharp wind pierces to their bones, and only suffered to remain out through the middle of the day when the weather is mild and sunny. Their stalls ought to be dry, clean, and free from dust, and accumulations of every kind. A strong draft should not be permitted to pass up through the floor upon which they stand, as it is liable to give them colds, rheumatism, and injure the udder.

After proper sheltering and feeding, much may be done for the cow by a judicious use of the curry-comb or card. No accumulations of filth should be allowed to rest upon the skin, even if washing is sometimes found necessary. Cattle will thrive better and require less food where the skin is kept soft and loose by proper care. An eminent physician, Dr. Rush, stated in a lecture upon the advantages of studying the diseases of animals, that there is an improvement in the *quality of the milk*, and an *increase of the quantity*, which are obtained by currying the cow. No farmer who has been in the habit of properly attending his cows, and has been familiar with the products of some of his less careful neighbor's stock, will doubt the correctness of the doctor's statement. Indeed, a high degree of thrift and health is as necessary in the cow in order that she may yield a full flow of milk, as it is in the ox or horse, that they may be able to perform well their labor.

On the other hand, care must be taken that the feed is not too concentrated and high. Severe losses occurred in some neighborhoods from this cause during the last winter. Milk sales were quick, and when the failing green feed and cold weather cut off the quantity, a forced feeding was resorted to in the form of corn and oil meal, shorts, &c., which by over feeding generated disease, and often an entire loss of milk, with an occasional loss of the animal itself. These remarks are particularly applicable along the line of railroads, where milk is collected in large quantities for the city markets. Little or no danger of this kind is to be apprehended where milk is not produced for this purpose.

Cows that are to "come in" in the spring should be kept in good flesh constantly, for the most care-

ful management after calving will fail to make them yield so large an amount of milk through the season as they would have furnished, had they been kept in good condition through the winter.

BEES.—In return for the sweets which these interesting insects afford you, they ought to have a little attention to ascertain whether a mouse has invaded their dominions, or their table is supplied with food. A weak swarm will sometimes fail to lay up honey sufficient for their winter wants. In such case place full combs from other bees in the top of their hives or in any place inside where they can get at it. They are not easily affected by the cold, but very soon feel the force of the sun's rays, even in very cold weather, and as it is not desirable that they move much until spring, that part of the hive exposed to the sun should be protected.

For the New England Farmer.

AUNT HANNAH AND MINISTER P- PLES.

BY R. A. MERRIAM.

MR. BROWN:—To redeem a pledge which I made to your firm some month or two since, I propose to say a word in favor of one or two varieties of apples, which I have growing on my farm, in Ipswich, and which are not so generally known as they deserve to be, and which, if they were so known, would be more cultivated.

In the first place, I will introduce your numerous readers to the very worthy and somewhat venerable name of "Aunt Hannah," being the oldest, but little known except in the immediate neighborhood of its origin. This apple originated on the farm of the late Col. Benjamin Peabody, of Middleton, now owned by John M. Ives, Esq., some fifty years ago, that is, I have known it for this length of time. I think the first tree of the kind planted on my farm must be over forty years old. The tree, though not larger than from ten to twelve inches in diameter, is healthy and vigorous and bears from one to two barrels of apples pretty uniformly. The apples sell for from three to five dollars a barrel; those who have once had them generally call for them again. They are the first apples selected by trespassers, and we usually lose about one-half of them by intruders; we lost nearly the whole this year after they were gathered.

This apple requires high culture, and secure position from pilferers.

It may be with this apple like most other aunts, most loved among her most immediate friends and acquaintances, and I myself may be of this number; still, I think every amateur gardener should have one or more trees of this kind in his garden.

The Aunt Hannah is of medium size, fair, green, with brown spots upon the surface, hard and firm pulp and crisp, very slightly acid and spicy taste, yellowish, when ripe, inside and out, suited for the desert, in December.

The "Minister Apple" is one which deserves to be more extensively cultivated than it is at present, although it has a good character in the eastern part of the country, where it originated. I understand it was found in the woods in Rowley twenty or thirty years ago and has been propagated somewhat in that region. It is a very large fair apple

with red stripes, quite acid, very tender pulp, more fit for culinary than table use, although not unpleasant for eating at this time. But the most remarkable property which belongs to it is its bearing qualities. It bears every year most abundantly, equal at least to the Baldwin, quite as large as this most favorite apple. It is very tender and requires very delicate handling when gathered, ripe in November and will keep till Jan. or longer, refused by boys when they can find the "Aunt Hannah!"

N. B. I have some fifty trees of the latter, three years from the bud, which I will sell, or give away as the case may be.

R. A. M.

Topsfield, Dec. 8, 1851.

For the New England Farmer.

THE WHEAT CROP.

BY RUFUS M'INTIRE.

Writers of late in agricultural publications account satisfactorily to themselves for the failure of the wheat crop on lands much cultivated, in asserting that certain elements in the soil essential to the production of wheat has, by bad husbandry, been exhausted or used up. They suppose that if their particular element could be restored, wheat could again be raised as abundantly as when the land was first cleared. They particularly mention the want of soluble silica as one principal cause of failure. This looks plausible, but still there are difficulties encountered in raising wheat, that their suggestions and rules do not seem to remove. In many places near the seaboard, wheat will occasionally produce bountifully; but four years in five, will, by rust, blast, mildew or some other disease, prove an entire failure, and this without any regard to how the land has been cultivated or manured. To supply what these learned writers say is wanting, they recommend the raising of clover and plowing it in green, as affording the requisite food for wheat, because, they say, clover contains the identical ingredients essential to the production of wheat. If so, pray where does the clover obtain the wanting ingredients? Cannot wheat find the materials as well as clover? Again they say, peas are a good crop to precede wheat to be used green as a manure, because it affords some ingredients useful in the growth of wheat, but extract little or no soluble silica from the soil, and leave it there for the future crop of wheat. Does this soluble silica rejected by peas increase by rest for the use of wheat? if not, why is it more available for wheat after this non-user by peas than before? I would not be understood to deny the fact that clover and peas do furnish a good manure for wheat; but I am considering the reasons given for it by agricultural chemists as a matter of science.

They further tell us that the want of soluble silica in the soil is the cause of the weakness in wheat straw, so that it will not sustain itself upright but lodge when the land is manured to produce a large growth. Experienced farmers have long noticed the fact on old cultivated farms, and the reason would be satisfactory if they did not know that Indian corn on the same lands finds no obstacle to procuring abundant glazing matter to give to its stock all needed stiffness. The silica appears to be there, and why cannot the wheat use it as well as the corn? I make these queries for the purpose of suggesting that the successful cul-

tivation of wheat may depend upon what it obtains from the atmosphere as well as what it takes from the soil—and further, that agricultural chemistry is but in its infancy—and that to make it useful to the farmer the analysis of the laboratory should be subjected to the test of careful and extended experiments in the field. It is to be regretted that much in the lectures of learned professors professing to teach the revelations of science, will on examination be found to be *hear says* and *say sos*. For instance, one professor in discoursing on the modes of preserving milk sweet, gravely says, that it is *said* milk put into bottles and corked tight and then boiled or scalded in water a certain length of time, will keep sweet for a long period.—The learned professor should have informed his auditors where they could get bottles strong enough to bear the operation. I have heard of witch doctor's endeavoring to kill the old woman supposed to have bewitched the churn so that it would not make butter, bottled the cream up and subjected it to the same scalding process; but when about to boil, the witch finding herself uncomfortably warm, burst the bottles and escaped. The doctor boasted he should have killed the witch, if the bottles had been strong enough.

R. M.

Parsonsfield, Me.

For the New England Farmer.

THE CRANBERRY.

MR. EDITOR:—I have read the admonitions of your correspondent in your paper of this date, and hope to profit by his advice. He will allow me to say, that his criticism seems to be carping at the meaning of words, and words only. I am not able to perceive any misapprehension of the idea, by the manner in which the quotation was made; nor was I aware of any abridgment or alteration of the sentence, until mentioned by him. I perceive now an idea of his, by his explanation, that would not have been thought of, without such explanation. But I am content to endeavor to promote the growth of the cranberry; and to let words take care of themselves.

Yours truly,

P.

Dec. 13, 1851.

LAUGH AND BE WISE.

The man's a dolt who lets in grief,
When he might ope the door to laughter;
If tears afford the heart relief,
They leave a void for some hours after.
Dull sorrow is a malady,
That ends in lunacy or phthisic;
But mirth is nature's recipe,
And laughter is the best of physic.

The kings of old, to shun at least
The ill effects of melancholy,
Kept merry folks, to crown life's feast
With sparkling wit and harmless folly;
So Comus rules with buoyant hand—
To mirth turns fear, and pain, and sadness,
And sends forth, ringing through the land,
The laughing shout of hope and gladness.

Care, oft indulged, is like a fire
That flames and burns the more you blow it,
Or, like a sexton—wrinkled, dire—
Who digs your grave before you know it.
For young or old—for sage or clown—
For all who live, or may hereafter—
To cure life's ills, or keep them down,
There's nothing like a fit of laughter.

POTATO-ROT.

The article in another column upon this subject, in connection with the laws of vegetable growth and decay, by Professor HORT, we commend to our readers, as one of the most thoroughly scientific investigations of the subject of the potato-rot that has yet appeared.

The statement which we published a few weeks since, showing that potatoes rotted more upon recent coal hearths, than places adjacent, has attracted much attention. The explanation since given by Mr. COMINGS in the Farmer should be understood by all. It is, that *carbonic acid* and not *charcoal* induces the rot. It is true that *carbonic acid* is formed of carbon (or charcoal) and oxygen, but it is *not* formed of charcoal except by *burning* it. Coal undergoes no change on exposure to the air, or when imbedded in the ground, and generates no carbonic acid. It has the power, when applied to the soil, of absorbing for the support of vegetation large quantities of valuable gaseous matters, as for instance, of ammonia, it is said to absorb 95 times its own bulk. The conclusion of the whole matter would seem to be that although the potato may rot on land where coal-pits have been burned, or on land on which earth from coal hearths filled with carbonic acid has been spread, yet charcoal itself can produce no similar effect. The gas formed when charcoal is slowly *burned*, in a close room, often produces death, but a man might sleep without danger, in a charcoal bin, unless set on fire.

The subject is peculiarly interesting, as showing the value of science applied to agriculture.

For the New England Farmer.

TO THAW OUT FROZEN PUMPS.

BY SANFORD ADAMS.

MR. EDITOR:—If I can be allowed the privilege, I think there may be some light thrown in the way of your readers to relieve them of much trouble which they have hitherto experienced during the inclement season. With a little care and suitable knowledge, much time and perplexity may be saved. The best way that has ever yet been found to secure a log pump from freezing, is to have a steam box from the platform to the nose a foot square, and connected with the pump so that the pump shall make one side of the box and an aperture through the platform to let the steam into it from the well.

This plan keeps the water cool through the summer, and the steam from the water in the well rises into the box and prevents the pump from freezing in winter, provided there is a tight platform and properly secured around it. Many pumps have a vent under the platform. Some let off by raising the handle, which brings the upper box in contact with the lower valve so as to open it. If a pump, through negligence, gets frozen, it is a very easy matter to thaw it out if one knows how. Some will heat iron bars and put in, some will put in salt, and either of these will do the work if one has

patience. But the quickest and easiest way is to use a $\frac{1}{2}$ or $\frac{3}{4}$ inch lead pipe and boiling hot water. A pump that is frozen 10 feet solid, may be thawed out in 10 minutes, by having a pipe to reach as low as it is frozen. Put one end of the pipe down the pump on the ice, swell the other to admit a tunnel, pour in the hot water, and the way the pipe settles down is a caution to the one that holds it. There is a current of hot water acting on the ice which does its work and rises outside. A barrel of hot water may be turned in without a pipe, and it will penetrate but a little depth before running off.

If any individual can gather information from these few plain ideas, I shall be amply paid for this communication.

What is there that adds more to the domestic comforts of a family through the inclement season, than a good supply of wood and water near at hand.
Wilmington, Dec. 15, 1851.

REMARKS.—These "few plain ideas," as our correspondent calls them, are just what are wanted. Dozens of pumps are ruined every year for want of knowledge how to thaw them out when frozen. The same method of thawing will apply to sink spouts.

A QUESTION.

HOW DOES WATER EXTINGUISH FIRE?

It would seem almost paradoxical at first glance, that water should extinguish fire, considering the elementary compounds of water, which are hydrogen and oxygen, the former being the most inflammable substance known, the latter, the chief supporter of combustion. In the first place, let us inquire how fire is extinguished? In putting out fire, we act on two principles: first, shutting out the air, by which it is deprived of its supporter, oxygen, or, in other words, smothering it. Second—by lowering the temperature of the combustible below the point of ignition, which, in most solid substances, is about one thousand degrees Fahrenheit. Any temperature much below this point destroys the affinity of the combustible for oxygen, therefore causing the combustion to cease. Now, when we use water to put out fire, on this last principle, the water coming in contact with the fire is immediately converted into steam or vapor, which absorbs nine hundred and fifty degrees of heat from the combustible. This soon lowers the temperature of it below the point of ignition, therefore the combustion ceases. The question may arise, why does not alcohol, being a fluid like water, extinguish fire? The reason is this: water is a natural compound, formed by nature, and found everywhere in nature. The elements of which it is composed have a strong affinity for each other. Chemical affinity is now supposed to depend on electricity, and caloric is the agent which destroys or opposes it. Now, when water comes in contact with fire, the caloric weakens very much the chemical affinity between its two elements, causing it to assume the form of steam; yet the affinity is strong enough to hold it in this form. Alcohol is an artificial compound, found nowhere in nature, nor formed by nature, but is always the product of art. Its elements, carbon, hydrogen and oxygen, have a very weak chemical affinity for each other, in the proportions in which they are united to form

this particular compound. Hence, when it comes in contact with fire, the calorific so destroys the chemical affinity of this compound, that it is at once resolved into its elements; its hydrogen and carbon immediately become inflamed.—*Phila. Dollar Newspaper.*

INTERESTING INFORMATION.

1. Why does coke burn without smoke? Because it is the distilled coal remaining in the retorts after the above process, and is consequently freed from all gases and vapors. Dr. Arnott observes, that "a pound of coke produces nearly as much heat as a pound of coal;" but we must remember that a pound of coal gives only three-quarters of a pound of coke, although the latter is more bulky than the former.

2. Why is a man jumping from a carriage at speed, in greater danger of falling, after his feet reach the ground? Because his body has as much forward velocity as if he had been running with the speed of the carriage, and unless he advance his feet as in running, he must as certainly be dashed to the ground, as a runner whose feet are suddenly arrested.—*Arnott.*

3. Why are serpents said to leap? Because they fold their bodies into several undulations, which they unbend all at once, according as they wish to give more or less velocity to their motion. The body of some serpents is thrown by the muscles into a very rigid state, when irritated; in which condition it breaks into fragments by the slightest stroke.

4. Why does a horse in the circus lean to the centre? Because, when the horse moves round with the performer standing on the saddle, both the horse and rider incline continually toward the centre of the ring, and the inclination of their weights counteract the effect of the centrifugal force.

5. Why is the robin the last bird that retires in the evening? Because its fine large eyes are fitted to receive all, even the weakest rays of light that appear. The worm is its food, too, and few that move upon the surface escape its notice.

6. Why was the chameleon formerly said to feed on air? Because its lungs are very large, and by expanding them, the animal can, at pleasure, make itself appear large or small.

7. Why does the sting of insects not only pierce the skin, but leave considerable pain? Because the sting is hollow, and conveys the irritating or poisoning fluid within the wound, from a peculiar bag.

8. Why do bubbles rise on a cup of tea when a lump of sugar is dropped into it? Because the sugar is porous, and the air which filled its pores then escapes to the surface of the tea, and the liquid takes its place.

9. Why is British oak more durable than that of North America? Because variable weather, as in Britain, conduces to firmness, whereas the hot summers of North America impoverish its growth.

PREMIUM APPLES.—Dr. WALKER presented to the Hampshire and Hampden Society, at their Show on the 8th of October last, some apples of the Rhode Island Greening variety, sixty of which made a bushel. They were from a tree budded on a seedling, and supposed to be only eight years from the seed.

For the New England Farmer.

GREEN PAINT.

A majority of your readers are more or less interested in the use of green paint. I will therefore give you the component parts, as manufactured by some large establishments in our principal cities, and sold as *genuine*. To be sure when first applied it is a beautiful green, but soon fades, and whitens out, as might be expected, when you are informed that one of the principal ingredients is lime.

To make Paris Green.

The body is Arsenic.
To color, use Blue Vitriol.
To set, Baromit.

To make Verdigris Paint.

For a body, Good Thomaston Lime.
To color, Blue Vitriol and Baromit.
To set, Alum and a little Salt.

Put up in tin cans, and marked,

☞ "Pure Verdigris Paint." ☛

This costs, per pound, to manufacture, about 12 cents, and retails at about 40 cents.

To make a green paint "that is paint," pulverize Verdigris. First prime with a lead color; then two or three coats of Verdigris and Linseed Oil. This will last an age. To freshen the color, once in eight or ten years apply a thin coat of linseed oil.

A durable and cheap paint for barns and out-buildings is an

Invisible Green.

To 5 measures of French Yellow mix 1 measure of Lampblack, with Linseed Oil applied raw, *without boiling*, or any spirits of turpentine, which the painters will object to, especially if they work "*by the job*." Oil used in a raw state dries slow, but will wear much longer; and the spirits of turpentine is used to make the paint spread easy, and to dry quick. But it kills the life of the paint, in proportion to the quantity used; as may be observed by examining the knots in a pine board,—the pitch kills, or *eats up*, the paint.

One measure of Venetian Red added to the above invisible green, makes a very handsome paint for out-buildings, and we think the colors look none the worse, as they fade.

Middlebury, Vt.

S. W. JEWETT.

For the New England Farmer.

WHITE GRAPES.

DEAR SIR:—I have been trying some time to get a native white grape in my garden, and have had several sent me that were called so, by friends in different parts of the country, but they have all but one, and that nearly so, turned out to be more of a brown or brick-dust color, with, to me, a dreadful musty flavor. Will some one of your correspondents give the desired information.

Truly yours,

R. LOWE.

New York, Dec. 1, 1851.

MOORE'S RURAL NEW-YORKER, is a capital paper. It is published at Rochester, one of the most beautiful cities in the country, is printed well, is judicious in its extracts and subjects for editorials, and opens rich like a honey-comb, having sweets in every cell.

For the New England Farmer.

POTATO-ROT,IN CONNECTION WITH THE LAWS OF VEGETABLE
GROWTH AND DECAY.

BY PROF. J. G. HOYT.

It is not wonderful, that the *potato*, constituting as it does an important, and, in many cases, the principal article of food throughout the civilized world, should be a leading topic of discussion in all our Agricultural journals. What ails it, and what will cure it, are questions of absorbing interest to every one who can wield a knife and fork.

Amid the heterogeneous mass of testimony presented on the subject of the potato-rot, it is extremely difficult, if not altogether impossible, to ascertain the truth. The witnesses on the stand, embracing the most experienced agriculturists as well as men eminent in science, contradict each other on some of the most important points in the case. Experiments, conducted apparently with equal care and skill, have led to totally different results. There was "method" in Hamlet's madness, but there seems to be no method in the potato-rot. Every sort of seed, prepared in every imaginable way, has been planted at every period in the season, in every variety of climate and temperature, on every kind of soil, dressed with every species of manure, applied in every practicable degree and manner, and yet the rot, without any apparent discrimination or regard to any regular system of procedure, has committed its ravages alike under all circumstances and in all places. Various and contradictory theories in relation to the matter have been advanced and defended, each in its turn, with commendable zeal and activity. But if nature, as Pope says with more truth than poetry,

"Acts not by partial but by general laws,"

laws simple and immutable, then every theory, whether based on *botrytis* or "black bugs," must, to deserve our notice, accord in all its parts with the laws of nature. The theory which seems to us to harmonize best with the established laws of vegetable growth and decay, and at the same time to reconcile, to the greatest extent, the discordant facts in the case, we will take the liberty to state and explain, as briefly as we can.

THEORY.

The rot is not the result of accidental causes, but is a disease, partly epidemic and partly hereditary. This disease may properly enough be termed a *dropsy*, caused by an excessive accumulation of unelaborated juices in the tuber. The plausibleness, if not the truth, of this theory will appear evident from several considerations. The commencement of the rot in the tuber is, with very rare exceptions, susceptible of philosophic explanation, *subsequent* to the blight in the leaves. This fact indicates, with sufficient plainness, that the disease has its origin in the tops. It is reasonable, aside from the fact, that this should be the case; for the young potatoes have no function to perform in the growth or decay of the plant—they are merely incidental, and their entire destruction should in the nature of things no more affect the plant, than the decay of apples on a tree should affect the tree. The fruit in each case is the passive product, and not the active producer, of an organism over which it has no control. If, then, the potato-rot originates in the tops, it becomes impor-

tant to know the part which these tops perform in the economy of vegetation. The leaves of the plant sustain towards the tuber the same relation which the lungs of a man sustain to the human body. They discharge two important functions: the one of *respiration*, the other of *perspiration*.

In the first place, then, the leaves are the respiratory organs of the plant. The sap or blood of the potato plant is not fit for the growth of the tuber until it has undergone a certain chemical change in the leaf, where it comes in contact with the air. The fact that the peculiar mechanism of the leaf does work a decided change in the sap of a plant, is strikingly illustrated in the process of grafting. The *scion*, and not the root or trunk of the tree in which it is inserted, determines the character of the fruit. Animals in respiration give off carbonic acid and absorb oxygen; plants, reversing this process during the day, absorb carbonic acid, which in the laboratory of the leaf is analyzed, the oxygen thrown off and the carbon appropriated to the growth of the plant. This carbon not only furnishes the material for the woody stalks and limbs, but, in the case of the potato, contributes about one-fourth of the starch or nutritive substance of the tuber. The moment, therefore, the leaves of the potato are from any cause destroyed or rendered incapable of performing their duties, the sap ceases to be carbonated, and becomes, as a necessary consequence, unhealthy and stagnant in the stalk, until at length by mere force of gravity it settles down through the cellular tissue into the tuber.

In the second place, the leaves are the perspiratory organs of the plant. The watery parts of the sap are thrown off by the leaves, just as the watery parts of the blood are thrown off by the lungs. This is seen in the excessive perspiration which constitutes *mildew*, as plainly as pulmonary vapor is seen in a frosty morning. Now if the leaf is unseasonably destroyed or blighted, the insensible perspiration is checked, and all the vessels of the plant become distended with a superabundance of aqueous moisture. If the tops should be light and the weather at the time dry and hot, evaporation from the stalk might carry off the excessive sap before it should become diseased and find its way down to the tuber; but if the tops should be rank and the weather wet, the sap would stagnate in the stalks and result eventually in the rot.

The whole process of the potato-rot, then, seems to be this: First, the leaves are from some cause blighted. Secondly, the sap, excessive from want of transpiration through the leaf and uncarbonated from want of contact with the air, becomes diseased, and finally settles down by its own weight into the tuber. Under this pressure of circumstances, the tuber, surcharged and bloated with the corrupt and fetid juices of the decaying plant, rots as in duty bound.

It may be proper in this connection to notice the objection to this theory, growing out of the fact, that the tubers do sometimes decay, as in the case of Mr. Comings, before the leaves are blighted. In all such instances, we have no doubt that the *seed*, gathered probably from a rotten field, was to a greater or less extent affected with the disease. This disease, by the laws of "ordinary generation," is transmitted from the "representative head" to the descendants. Tops, roots and tubers are "altogether born in sin." The taint, which was

lurking in the system of the parent potato, is communicated to the progeny, fulfilling the Scripture—"the iniquities of the fathers shall be visited upon the children to the third and fourth generations." Leaving out of the account, therefore, those few cases, where, in consequence of unhealthy seed, the indications of disease are as likely to appear first in one part of the plant as another, the proposition, that the rot in the tuber is subsequent to the blight of the tops, is in accordance with truth as well as general observation.

The inquiry now arises, what is the cause of the blight in the leaves and stalks of the potato? This question has received a variety of answers. In view, however, of all the light which now shines upon the subject, we may say safely enough in a general way, that the blight results from one of two causes—either from the ravages of minute insects or from some peculiar atmospheric influence. The fact that it occurs every year at about the same time, would be equally favorable to either of these suppositions. Every species of insect has some distinct period, longer or shorter, assigned to it, in which to commit its depredations. The rose-bugs are a familiar illustration of this truth. So, too, in the atmosphere, those subtle agencies, which are fatal to life in the animal as well as in the vegetable world, exercise their power only in fixed periods and at regular intervals. Fevers are a familiar illustration of this truth. Certain well-attested facts would seem to indicate that some hidden malignant agency in the atmosphere causes the blight. Those "little black bugs," which have attracted unusual attention the past season, undoubtedly aggravate the evil somewhat, but the theory that they are the sole authors of the mischief, has been not inappropriately termed by Prof. Harris a "humbug." Oftwo contiguous fields, peopled alike with little bugs and big bugs, of as many colors as the spirits in the Witches' Song—fields of similar soil, dressed alike and planted with the same kind of seed at the same time of the year, but of different aspects or exposures, the one, open to the wind, is blighted, while the other, protected from currents of air, escapes. In the same field, rows, sheltered by the fence or in some other way, continue green and flourishing when all the rest have withered. A few hills covered with glass in the midst of a field, yield sound potatoes, while all the rest are rotten. The track of offensive fogs is suddenly and distinctly marked by the blight. Other plants are affected simultaneously with the potato. Our own water-melon vines, for instance, for the last three years have all been struck fatally at the same time exactly as the potato tops, near which they were growing. These facts, and others of a kindred nature, all point to the atmosphere as containing the noxious cause of the disease; but whether this noxious cause be an excess of carbonic acid, or of carbonate of ammonia, or of "sulphurous chlorine mixed with certain other gases," or of something else, is yet to be determined. It is an unfortunate fact, that, notwithstanding the unparalleled researches bestowed upon the subject, this vegetable cholera, the potato-rot, like the Asiatic cholera, is under the control of laws not yet fully discovered; still the experience of practical agriculturists and the experiments of scientific men, warrant us in the belief that the disease may be alleviated and counteracted to a very great extent. As a means of prevention or at least of alleviation of the rot, we venture to make with

some confidence—a confidence engendered by uniform success—the following

RECOMMENDATIONS.

First.—Plant early. The blight, as a general if not universal rule, strikes the tops in the month of August, at any rate not before that time. If planted early, therefore, the sap of the plant may all be assimilated and the potatoes be ripe before the plague comes. Count Gasparin, an eminent French scientific agriculturist, mentions, as reported by the Commissioner of Patents, that "in the south of Europe two crops of potatoes are obtained in one year. The first crop is planted in March and harvested in June; the second is planted in July, after the wheat is cut, and taken up in October. The first of these crops was absolutely sound; the second was diseased."

Second.—Plant on light soils, with thoroughly fermented dressing never put in the hill. The richer the soil and the more abundant and concentrated the manure, the ranker and more luxuriant will be the vines. Let the blight strike the leaves of such vines, when in full sap, and the heat of the weather, however intense, will hardly be able to carry off by evaporation the raw and uncarbonated juices; and if not thus carried off they will as a matter of course become putrescent and eventually corrupt their way down to the tuber. On the other hand, the lighter and feebler the soil, the smaller will be the vines. The probability, therefore, is, that should the blight strike them, the evaporation, especially if the weather should fortunately be dry and hot at the time, would carry off the sap without endangering the tuber. It is worthy of remark, too, that if the soil should be *light-colored*, the reflection of the heat from it would greatly facilitate the process of evaporation.

Third.—Some have supposed, from the well established fact that the potato soon decays when exposed to the action of ammonia, that the blight is caused by an excess of carbonate of ammonia in the atmosphere. If this hypothesis is correct, sprinkling the tops at the right time with sulphate of lime, or plaster, as it is commonly called, would remedy the difficulty at once. The sulphuric acid of the lime drives out the weaker carbonic acid from the ammonia, and takes its place; while at the same time the ill-treated carbonic acid makes suit to the forsaken lime and is promptly accepted. In this way, by a sort of unscriptural exchange of wives, carbonate of ammonia and sulphate of lime become sulphate of ammonia and carbonate of lime—an arrangement, whatever may be said of its morality, very profitable for the soil.

Fourth.—A careful writer, A. G. Comings, before referred to, in a recent number of the *Farmer*, thinks that carbonic acid is the cause of the rot, and that whatever will remove or neutralize this acid, "will be gratefully acknowledged by the afflicted potato." If this supposition is true, the difficulty could be easily remedied by the application of lime to the soil or to the tops or to both. The carbonic acid would immediately unite with the lime and form carbonate of lime, an insoluble salt, familiarly known as chalk or marble—a substance alike inefficient for good or evil to anything that grows. An equally sure remedy would be secured by the agency of any one of the alkalis or of the alkaline earths—the former making with the carbonic acid soluble carbonates, the latter insoluble carbonates.

Fifth.—Select the seed from a field which has not been attacked by the rot. Tubers, apparently sound, if taken from a blighted field, must sympathize more or less with the general disease. Though they may not be absolutely putrescent, yet their tendencies are all that way. Under such circumstances, they may be said to be predisposed to rot, as a child is to sin.

Sixth.—If, in spite of all precautions, the tops should be blighted, cut them off with a scythe immediately, close to the ground—the closer the better. This will prevent the diseased sap of the stalk from descending into the tuber. Do not wait an hour after the first symptoms of the blight appear; for if, in the natural circulation of the sap, the tuber becomes inoculated with the virus from the vines, its eventual destruction is sure—"salt can't save it."

Seventh.—The potatoes when dug should be carefully sorted and thoroughly dried; and then placed in small bins in a dry cellar. Coal-dust or powdered charcoal, applied at the rate of five or six quarts to a barrel, is undoubtedly useful as an antiseptic: its extreme porosity enables it to absorb in great quantities moisture and noxious gases, and thus to preserve the potatoes sound.

These precautionary measures we have ventured to suggest to your readers, because we have ourselves found them uniformly beneficial and certain in their effects. They may serve a good purpose, until some benefactor of his race shall discover the specific cause of the disease and its specific remedy. Whatever the future may reveal, we certainly do not yet think that the potato-grower need say in the despairing language of the Moor—"Othello's occupation's gone." J. G. HORT.

Exeter, Nov. 24, 1851.

EVERGREENS FOR A NORTHERN DEFENCE.

It is often necessary to secure certain enclosures from the cold and drifting winds which during the autumnal and winter months, as well as during the earlier periods of spring, blow so constantly from the north. For this purpose I have found no protection superior to that afforded by a close and compact plantation of thrifty evergreens. The silver fir, (*Pinus sylvestris*), is a vigorous, thrifty and elegant tree, and when properly transplanted and managed, makes a close and compact defence, which is highly ornate in its appearance, especially during winter, when all around is desolate and dreary to the eye.

Fruit trees that are induced to put forth too early in the spring, and which therefore require to be set on the north of buildings where the propensity to premature inflorescence may be restricted, should be protected by a row of evergreens, which is a much better preventive than high fences, or buildings, as the air has a free circulation, at all seasons, through the boughs, which afford all the necessary advantages, without any of the inconveniences and disadvantages of the former. Paths and roads that, from their exposed locality, are liable to be rendered dangerous or impassable by the obstruction of snow drifts during the winter, should also be sheltered by lines of evergreens. With a little care, and the manuductory suggestions of good taste, these may be made to conduce greatly to the elegance of any place. Barns, out-buildings and even dwelling-houses, protected on the

north and west by flourishing and well-arranged plantations of evergreens, are much warmer than those which are nakedly exposed. There is, generally speaking, but little difficulty experienced in making these trees grow. All that appears to be essentially requisite to secure success, is to remove them with proper care, taking with each tree a sufficiency of soil to retain the small roots in a moist state, and in their original position, and to set them firmly and securely in the ground. Mould from the forest in which they have grown is the best manure that can be applied. All fermenting or fermentable manure should be rejected, and if the soil is of a loamy or sandy constitution, clay, mixed with rich garden mould, will be found a most excellent application, especially in the spring. Out of a hundred trees transplanted, scarcely one will fail.—*Germantown Telegraph.*

For the New England Farmer.

NEW YEAR'S MORNING THOUGHTS.

'Tis New Year's morn, and all is still;
And while I silent sit, sober
Reflection throws her mantle o'er
My mind, and thus in breathless
Whispers says,—“Another year is gone;
Another arch in the bridge of life
Has fallen, and with it how many
Lives have perished! Ye who still survive,
Review the past—review your deeds,
And ask why you've escaped.
Is it for your own good works?
Can you claim superior skill
In guiding the frail bark of life
Down Time's rapid tide, in which are
Rocks and shoals innumerable?
Nay, verily; but He who sees the
Sparrow fall, hath still upborn you,
And, if in Him you trust, will ever.”

As thus I musing sit, the future
Breaks upon my view. Anticipation
Steals my thoughts, and thus she seems to say,
“Past errors may forgiven be, yet
Better far, never to commit them.
Therefore be wise in future; commence
Anew thy life, firmly resolved to
Pass the present year—if life is spared—
In doing good; then shalt thou be blest,
And have indeed a Happy Year.”

Her words are wise, her counsel good,
And may it be well received; may all
Pursue the paths of Peace,—guard well their
Thoughts and acts, and aim at happiness.
So living, when our Father calls,
Cheerfully the summons we'll obey.

AQUILA

ENGLISH FARMING.

Sam Slick, writing from England, says, “Arter all, they haint got no Indgin corn here; they can't raise it, nor punkin-pies, nor quinces, nor peanuts, nor silk-worms, nor nothin'.” Then as to their furmin'—Lord! only look at five great elephant-lookin' beasts in one plough, with one great lummokin' feller to hold the handle, and another to carry the whip, and a boy to lead, whose boots has more iron on 'em than the horses' huffs have, all crawlin' as if they was a-goin' to a funeral. What sort of a way is that to do work! It makes me mad to look at 'em. If there is any airthly clumsy fashion of doin' a thing, that's the way they are sure to git here. They are a be-

nighted, obstinate, bull-headed people, the English, that's a fact, and always was. There is a plow down in Maine that ought to be sent over to the 'World's Fair.' It is a dangerous nondescript, though. The inventor chained it up the afternoon on which he finished it, but it broke loose in the night and killed two cows."

PRACTICAL AGRICULTURE.

Agriculture is the oldest of all the pursuits of man. Abel was a keeper of sheep, and Cain a tiller of the soil. It is one of the most honorable pursuits and one of the most useful. It is the most healthful, the most independent, scientific and erudite. A thorough farmer cannot be such without a knowledge of many sciences. The forecandle hand on shipboard knows how to handle the sails, but he knows no more of the art of navigation, than the tailor on his shop-board, or the physician in his laboratory. So a farmer may, by practice, learn how to handle the plow and the hoe, but a great deal more knowledge than this is included in the art of the husbandman. So much, that the man who knows it all is truly a learned man.

Buffon caused on his statue to be inscribed, "a genius equal to the majesty of nature"—"but," says a learned botanist, "a blade of grass was sufficient to confound his pretensions." A farmer may find a field of science in every plant on his broad acres, whether it be raised by his sweat and skill, or by the despised weed which he seeks to destroy. If he will master all the science of the old oak tree beside his barn, or the pigweed beneath his feet, he will have a stock of learning that will forever afford him a fund of most agreeable contemplation, and at once enable him to improve his farm as it has not yet been improved. The whole vegetable economy furnishes matter for mental food vastly greater than its supply of corporal nutriment, and not less agreeable.

The structure and function and uses of the vegetable world, what is known, and what is unknown of it, can never fail to furnish either most pleasant knowledge or curious matter for research. But the science of vegetable physiology, enough in itself to make a wise man, is only one of many included in the thorough knowledge of agriculture. Geology, botany and chemistry, all must be known, or let a man boast as he may of his knowledge or skill, a blade of grass is sufficient to confound his pretensions. This it is that makes the farmer's pursuit honorable, and if he produces enough for his consumption, no man is so independent and happy. And he is a most useful citizen to the State. No man it has been said is so useful as he who makes two blades of grass grow where but one grew before.

Most frequently a great error is committed by young men, who, revolting from the labor of the farm, and reduced by the fancied road to luxury and wealth, which each dirty street of a city seems

to their dazzled senses, quit the plow and resort to the counter, in the delusive dream that they have found the highway to wealth and ease. How many of such are there now in this city, in the decline of life, not only without the anticipated fortune, but destitute of a home!

For the New England Farmer.

SAVE THE MANURE HEAP.

Every man who has kept horses knows how a heap of horse manure will heat and burn. A heap which would measure ten cords will burn away some cords of its bulk, while the process of fermentation is going on. I use the term *burn*, for there is something more than rotting about it.

Stable manure from oxen and cows, if so gathered as to include the urine with the solid excrements of cattle, upon being worked over, will commence a rapid fermentation, and will undergo a great change, becoming less in bulk and very light.

Many persons work over their manure heaps and add quicklime to hasten their fermentation, or burning, from the supposition that the manure is greatly benefited by such a change as it undergoes in the heap.

That the manure is so changed as to have a more immediate effect upon the plants it will support, is not disputed. But it is contended that in the course of this fermentation, as it is usually allowed to go on, a very valuable and large portion of its properties are expelled from the heap, go into the air, and are lost.

Such burned manure, when applied to beans, peas, wheat, or other plants needing much nitrogen, and having in their constituents much gluten, would have been very poorly assisted by any quantity of such manure.

For the formation of muscle, in man or beast, food must be taken which contains a large amount of gluten, in which peas, beans and wheat are uncommonly rich. To produce such plants as are rich in gluten, nitrogenous manures must be applied. The urine of animals contains a very large amount, and we may speak of it in the form of ammonia. More or less of it is in every manure heap.

During the fermentation, which I have called burning, of the manure, under ordinary circumstances, the ammonia is separated and goes off in the atmosphere. This is a very great loss. The manure, for ordinary purposes, loses a large portion of its value; while for many crops it becomes nearly valueless. Every farmer and stable-keeper should know how to prevent the escape of the ammonia from his manure heap.

REMEDIES.

Plaster of Paris, (sulphate of lime) has been recommended by some, and is valuable to a certain extent. I do not wish to undervalue it. If a manure heap is covered with it to a sufficient depth, it will retain the ammonia. But such a mere powdering and whitening of the surface of the heap as is sometimes seen, will be of little use.

What sulphuric acid there is with the lime, in forming the plaster, will enter into combination with the ammonia, producing sulphate of ammonia. This is a valuable service. And if the quantity of plaster used is equal to the circumstances of the

case, it will do all that is required. But that will not often be the case.

Plaster is exceedingly valuable, when sown among wheat or peas, or beans, or clover, as a top dressing. It takes into combination with it the nitrogen of the air, and absorbs the ammonia of the falling rain.

To meet the wants of the manure heap, I think that sulphuric acid (oil of vitriol) directly applied with water, will be found much cheaper and more valuable.

Mix with ten gallons of water one pint of the acid, and saturate the manure heap with it, providing of course, according to the size of the heap and its disposition to heat. The sulphuric acid with the ammonia will form sulphate of ammonia, and both of these properties enter into the composition of our most valuable plants or products of the soil.

The cost of a few gallons of sulphuric acid for such a purpose would be money at a very large per cent. interest. But let it be handled cautiously, by the inexperienced, lest injuries be the consequence of carelessness. Put the water into a wooden vessel, and then put the acid to it.

There is nothing lost, in this application. The sulphuric acid would enter into the plants, if applied to the soil separate from the manure.

There is a great profit in it. The most valuable properties of the manure heap are kept from waste.

Mason, N. H., Dec. 10, 1851.

THE HORSE.

Because the farmer is located upon his own land, and finds plenty of employment there, it is no reason why he should not look out occasionally from the "loop hole of his retreat" upon the wide world, and himself add something to its pleasures and also gain by its teachings. Nor must we forget to notice how the world wags around us, because we are an agricultural editor, and "find it in the bond" that we must discuss cattle and cucumbers, pigs and potatoes, plows, pumpkins and parsnips.

"No pent up Utica contracts our powers,
But the whole boundless world is ours,"

and we shall appropriate such portion of it as will seem to us to be acceptable to the reader in whatever realm it may chance to be.

Here, then, we find a lecture delivered at Manchester, N. H., by Dr. J. V. C. SMITH, of Boston, a gentleman who has visited a goodly portion of the world, and has a pleasant way of imparting the information he has gained.

Well, what has all this to do with the horse? asks the reader. Why, surely this, that Doctor Smith visited Palestine, or the Holy Land, a spot crowded with interesting associations for us all, and among other matters spoke of the Horses there. He says,

"They were mostly of a dapple grey color. Had no barns—no hay—their caravansaries were rather like barn yards; he had slept in them—horses were generally fed on chopped straw and beans; about two quarts of the latter to a feed—the straw

was used for the purpose of distention, whilst the beans was a highly concentrated nutrition, which alone, would so contract the bowels of the animal as to produce disease—hence the great value of a combination of the straw with the beans.

He thought the same principle of feeding might be practised in this country, and that successfully, both in a physiological and pecuniary view."

THE PLOW.

The Doctor's observation extended to every thing that was to be seen. From the following extract we suspect he has something of an agricultural turn, with all his other gifts. He observes,

"The land was cultivated here under a very great disadvantage—using the same instruments now, that were used two thousand years ago. Here they saw a great tomb cut out of solid stone; on either side of the spacious entrance niches were cut in, and the whole workmanship within evinced great skill and experience. This tomb was built 4000 years ago. Herodotus visited it two thousand years ago, and speaks of it as having been then two thousand years old. In its finished walls were wrought a splendid figure of a young girl dancing; also the plow was there, a fac simile of the plow used by the inhabitants now. This people are very tenacious in their habits. They are very remarkable at horsemanship—train their horses to perform wonders—ride with great speed over rocky crags, and among rolling pebbles. It would, in his opinion, be a hopeless task for an army of 100,000 men to conquer 500 of the meandering horsemen."

A HORN.

It must be interesting to all to observe through what an immense period a single custom will be preserved; simple, yet pregnant with meaning to those who observe it. It is supposed that a portion of the Psalms was written as remotely as the time of Moses. If so, that portion must have been composed over *three thousand* years ago. In the 92d Psalm, the writer says:—"But my *horn* shalt thou exalt like the *horn* of an unicorn;" and in the 148th, "He also exalteth the *horn* of his people, the praise of all his saints." The term frequently occurs in Scripture as a symbol of power and exaltation, as Hannah's declaration in 1st of Samuel, chap. 2, verse 1, "Mine *horn* is exalted in the Lord," and the prophet Zedekiah "made him horns of iron," and told Ahab that with them he should push the Assyrians, until he had consumed them. Bruce, the celebrated African traveller, states that the Abyssinian chiefs and governors of provinces wear them. They are made of different forms and substances; and sometimes, as Dr. Smith says, the cow's horn itself. It is a custom with us on the loss of friends to "wear mourning" and a downcast demeanor; so that the erection of the "horn" in gladness, or depressing it in sorrow, is not much unlike our custom after all, curious as it may seem. The horn was attached to a broad fillet passing round the forehead and tied behind, from the centre of which it projected, and could be raised or depressed at pleasure.

The investigations of modern travellers have explained a great number of allusions and intricate passages of Scripture, which have heretofore remained almost a dead letter to a large majority of readers. But let us see what the Doctor says about "the horn."

"All married women here, wear a *horn*, sometimes a cow's horn from ten to twenty inches long. They also go veiled. David, the Psalmist, spoke of this horn. The position of this singular ornament indicated the feelings of its fair possessor. If, happily, no sorrow mars her peaceful cot, the horn will be erect; but, if sorrow dwell in her habitation, it will be seen to drop down.

He witnessed a marriage ceremony among this peculiar people, and in the procession noticed only one horn, perhaps the mother of the bride. The bride was escorted by a large number of young ladies singing plaintive airs. All the women cover their faces in that country. It would be the height of immodesty for one to go with her face uncovered in the open street. Rebecca of old, when being sought in marriage, took her veil."

THE FIRST EAR OF CORN.

You are probably aware that corn (Indian corn) is unknown in Paris. It is neither known as green corn, nor as sweet corn, nor as pop corn; as corn in the kernal, or corn on the ear. It is rarely seen, even when ground into Indian meal. I speak of Paris and the neighborhood only; for I believe that it is cultivated in the South of France, to a limited extent, under the name of *mais*. I was, some weeks ago, at a dinner party, given by an American gentleman, at his chateau, in a suburb of Paris. Upon the table were green corn and sweet potatoes, results of perhaps the only efforts ever made to acclimate them here. As the corn was passed around, you might have distinguished the Americans from the French, by noticing who accepted and who declined. The former were eager to renew an acquaintance long since interrupted, while the latter fought shy and kept the waiters at bay. It fell to my lot, however, to initiate into the mysteries of this novel vegetable a young French lady at my right hand. To her, the ear upon her plate was a revelation. Its shape was anomalous, its odor singular, and, moreover, the manner of eating it was barbarous. Before attempting its demolition, many an unanswered inquiry passed through her bewildered little brain. Was the outside a mere rind, inclosing the pulp in the interior? Or was it nutriment to the core, and succulence to the centre? Did it have a stone? Did it intoxicate like the maguery? Would the juice start forth, as from a ripe tomato, at the first immersion of the teeth? Might it not be poisonous, like the nightshade or the toadstool? By this time, her ear was ready, buttered, salted, and each now alit through the centre. I flatter myself that the utter failure of the experiment can in no way be attributed to want of skill here. My pupil ate about half a double row, and then retired from the field, content with the laurels she had won, but perplexed by the cob, and sorely teased by the tissue-like-skin in which kernels were involved. The next day she was taken sick, and was compelled to keep her room. Anxious to prove to her that however lightly she might treat the offending vegetable, it was made, in former times, the subject of thanks-

giving to whole races and nations, I sent her an engraving from Mr. Catlin's frightful picture of a 'Chippewa Dance to thank the Great Spirit for Green Corn.' She thought that to a Spirit, that favored the growth and presided over the harvesting of such a product, just such a demonstration would be acceptable. The demoniacal orgies in which those Chippewas were indulging, could not be more fittingly introduced than at a Green Corn Festival."—*Paris correspondent N. Y. Tribune.*

PEARS RUNNING OUT.

Any person conversant with fruit, who will take the trouble to walk through the markets of Philadelphia, where more Seckel pears are to be seen than anywhere else in the world, cannot but be struck with the very small size of these pears. If he has besides been in the habit, as we have been, of seeing the Philadelphia markets at this season, for some years past, he will make the comparison between the Seckel pears of Philadelphia now, and those of ten or fifteen years ago. Then, the Seckel pears might be seen by the wagon load, large, fair, ruddy, and handsome, as well as delicious. If you mention this present degeneracy to a Philadelphian, he will shrug his shoulders, and say, "yes, the Seckel pear is no longer what it once was: I am afraid it is running out."

And yet, if you go to Boston, which is far from being so favorable a climate for fruit culture as that of Philadelphia, you will see Seckel pears so large and fine that you almost doubt their being the same fruit. If you are curious to investigate the history of the Seckel pear culture in the two places, you will not long be at a loss how to account for the difference. In Philadelphia, they trust to nature, and a soil once highly fertile. But the Seckel pear trees have exhausted the soil, because it had only a certain amount of pear tree elements, and languished for more food. In Boston, they know that nature is a hard mother, and they rely on art, trenching the soil twice as deep as nature makes it, and supplying an abundance of food for the growth of the tree and fruit. Hence the average size of the Seckel pear in Philadelphia has dwindled down in twenty years from an inch and three-fourths in diameter to a little more than an inch; while in Boston it has been raised by high culture to between two and three inches in diameter.

Some soils, however, contain in themselves an almost inexhaustible supply of natural food for fruit trees. Even long culture wears out such soils slowly, because the mineral elements of fertility gradually decompose and form new soil. We have before us a couple of Seckel pears, of extraordinary size and beauty, sent us from Brandon, on the James river, Virginia, one of the largest and oldest estates in America, having been cultivated since the earliest settlement of the country. This estate still shows large fields, which under the present good management (i. e. the judicious application of lime,) yield thirty bushels of wheat to the acre. But the Seckle pear trees here, without any special attention, still bear larger and finer fruit than we have seen in Philadelphia. It is useless, with such proofs of the effects of soil and culture upon fruit, for our Philadelphia friends to talk about the "running out" of so modern a pear as the Seckel. It is the soil which has run out, not the variety.—*Downing's Horticulturist.*

*For the New England Farmer.***HINTS FOR FARMERS.**

BY M. C. SAWYER.

I notice, with pleasure, that the "New England Farmer," with its frank agricultural countenance, now finds its way among our hills, to instruct and entertain the farmer and throw an additional charm around his cottage home, these long winter evenings. And through its columns I wish to say a few words on a subject of vital importance.

The fashion, or fever, long prevalent, of cutting down all trees, not bearing fruit, is decidedly reprehensible. Even shade-trees, in pasture lands, are sacrificed to this gormandizing policy.

Look at the naked acres of New Hampshire, as bare as a desert, yielding a small per cent. of grass! Here, large farms have depreciated in value, in proportion as they have been shorn of rural beauty. If, by stealth, or what he calls poor husbandry, the bushes get a start, on some side hill, the bush scythe is soon in motion, and the ground burnt over, to obtain a meagre crop of rye! This is a bad practice, and radically wrong. These bushes, left undisturbed, in a few years, would have been trees, and the necessary tillage land not at all diminished. Within thirty years, I have known thousands of acres of woodland "cleared" and the wood burnt on the ground, under the mistaken idea that cleared land was the more valuable; and that hemlock trees were worthless, saving the small value of "Bark," for tanning purposes. Not a vestige now remains, where once stood the primitive Pine, with its cotemporary, the Oak. That ancient race has become extinct—no germ of theirs succeeding!

I observe that people not only go to the city for flour, but also to purchase "clear stuff" for modern dwellings; and will at no distant day, if this exterminating policy is continued, have to go there for their fuel.

"O, woodman, spare that tree!"

Seedlings and sprouts, if properly secured from the ravages of cattle, with a little care in pruning and manuring if need be, will in a few years become sturdy saplings, and noble trees for the next generation. Here are farms, now well wooded with "second growth," that would be of little value if the wood was all cut off.

One cause of those vegetable diseases which scathe the farmer's crops, and sweep over his unprotected fields, is the want of a proper atmospheric balance which the woodlands formerly held over the preponderating gases. These gases, now set free, settle in low places, where the wind whirled not, and miasm, deadly with mildew and disease, is evolved, to the great damage of grains, and esculent roots. And those myriads of insects, that formerly seldom left the forest, but thus lived, fecundated and swarmed, now resort to orchards, fruit trees and fields of cereal grain, for that purpose; hence their apparent increase.

Farmers should learn the value of the sub-soil plow, and reclaim their worn-out lands—cultivate less surface, but more depth, and get larger crops. They should improve their meadows, and leave their surplus acres to become wooded, making an investment in "Rural Stocks," for the good of posterity.

M. C. S.

Bristol, Dec. 22, 1851.

REMARKS.—We thank our obliging correspond-

ent for his complimentary words; that is just what we are striving to do; to give the Farmer an interesting "agricultural countenance," considering, when we have accomplished this, that one great point is gained towards sending it into some thousands of families where it is now a stranger. And strange as it may seem to those not so immediately interested as ourselves, it is our settled conviction that it would really "instruct and entertain the farmer, and throw an additional charm around his cottage home." We commend the hints of the writer to every one who loves a tree, whether they own it or not. Patience almost ceases to be a virtue, with the Vandal spirit that robs the earth of its beauty and its conservators of health. On our way to the State Fair at Manchester last September, we passed over a tract of country which a few years since was densely covered with a fine forest. Noble old oaks, and pines and hemlocks, stood there, representatives of other generations, and stretching forth their arms as a welcome shelter to the traveller from the burning sun or beating storm. Their blackened trunks were prostrate on the earth; not one was left to catch the passing breeze, and sing the requiem of its murdered fellows; bleak and smouldering desolation presided over the late beautiful scene that a Druid might envy, and the cottages, stuck upon the hill-side, and seething in the broiling noonday sun, looked like the homes of Despair. It would not be an uncommon case to find these same persons earnestly at work next spring in digging out the stumps of the trees lately cut down, and transplanting a few sickly shoots for ornament and shade about their dwellings! What untamed spirit is it, in man's bosom, that impels him to this desecration of the useful and beautiful; cutting, as it were, a pathway for the storm-spirit to rage through unmolested, and an opening for August suns to smite the heads of his unoffending wife and children!

*For the New England Farmer.***THE WHEAT CROP.**

BY H. POOR.

MR. EDITOR:—It is indeed gratifying to see so deep an interest manifested in growing wheat. In some of the counties in Maine, they have raised sufficient for their own bread. In Massachusetts, Vermont and New Hampshire, the farmers are getting their eyes open to the subject. Is it not time! The past year, and the previous, have wrought wonders in this comparatively new branch of farming. Do we need more proof? We would flatly and unqualifiedly say no, and listen to the voice of experience rather than to newspaper editorials that would make a bugbear of a world, or smut or rust the dread avengers of all coming time. We would say to all, "thank God and take courage."

Every farmer knows well the cost of a barrel of flour, and some of them know, that the last pig, the last calf, the last load of hay, must be parted with to buy flour to feed his hungry little ones

How hard to part with this property, so much needed in the well-regulated requirements of his farm; but so it is; who will deny it.

Then where should he look, to what end should he apply his labor, but to supply that most needy of all things, *bread*, which may be made to spring from the farm, "the blade, the ear, and the full corn in the ear."

Apathy has long brooded over the public mind. Distrust of climate and soil have been erroneous and preconceived notions. And now, when the sunlight of experience, confined to no one single farmer, and to no one single State, hereabout can testify to its entire practicability, why not adopt it!

Mr. Editor, if you doubt, put the question to the farmer, and I will guarantee you an honest response. Ask Mark Morse, Esq., of Francistown, N. H., one of the largest and most intelligent, practical farmers of that State, and he will say to you, from seed raised in Massachusetts, he has taken twenty-five bushels of winter wheat from one bushel of seed, that makes "sweeter flour" than any he can purchase from the west, and as "white," too. His opinion, publicly made in your valuable paper, would do good to the cause. May we call on that gentleman for his views.

All we need is light. Let every farmer speak his experience, and thereby a host of practical believers will follow.

Yours truly, H. P.

North Andover, Dec. 13, 1851.

MR. THOMAS SWEETSER.

In a recent number of the *Granite Farmer*, published at Manchester, N. H., we find an obituary notice of the person whose name we have given above. Although we had no acquaintance with the deceased, and no knowledge of him excepting what we gather from the notice before us, we copy a portion of it with pleasure, because it is given in good taste, cherishes the memory of a good man, and affords evidence that our own efforts in the broad field of husbandry have not been in vain. The writer says:

"Mr. Sweetser was an industrious, worthy citizen, and an intelligent farmer. When a worthy professional man, or a mechanic of notoriety, is taken away from the community, there are usually found many ready to eulogize their characters, and lament their departed worth. Nor do I complain of this. But when from humble life a successful and intelligent farmer is removed, though it may be in the meridian of life, and in the midst of successful effort, how seldom, as a farmer, has his obituary notice been given to the press. I do not recollect, at this moment, a solitary instance of the kind; and it was reflection on this point that led me to send this notice."

After speaking of the early opportunities which the subject of these remarks enjoyed for early education, which were very limited, and of the various pursuits in life in which he engaged, he adds:—

"He 'read what books he could,' and reduced to practice every feasible suggestion. He relied much upon the *New England Farmer*, and indeed made that his text-book to direct his farming operations.

He gave great attention to composting manures, and spent very much time and labor upon them; and his waving fields gave tangible proof that his crops were fed by them; and his flocks, that fed upon these products, showed by their thrift that they received from them the elements of life and health.

"He also reclaimed meadow and swamp land with good success, and had others under progress when he died.

"Here are the results of 'Book Farming,' and they are having an excellent effect upon the community in which he lived. While they have lost a kind and friendly neighbor, they have the plain results of judicious, intelligent and efficient labor left."

Who can tell where the good examples of this "honest laborer in God's vineyard" shall end? What waving fields and crowded garner may spring from the word which he spoke, or the work which he did? Or how many, quoting his precepts and copying his examples, shall labor on guided by intelligence, crowning the hills with verdure, and pressing the vales with fatness. Such are the men who "constitute a state," of whom the poet says:

"His youth was innocent; his riper age
Marked with some act of goodness every day;
And watched by eyes that loved him, calm and sage,
Faded his late declining years away.
Cheerful he gave his being up, and went
To share the holy rest that waits a life well spent."

For the *New England Farmer*.

SIBERIAN CRAB APPLE STOCKS.

MR. BROWN:—The Siberian Crab is generally considered very hardy. It is not affected by cold and heat, nor by sudden changes of weather, as most varieties are. Are stocks from the seed of the same nature, and do they make as large and long-lived trees, as stocks from the seed of other, and large varieties? Mr. Downing, in the *Horticulturist*, vol. 4, page 197, says, "we know nothing of the effect of grafting the apple on the Siberian Crab stock." Mr. Ives, in his *Book of Fruit*, page 34, in speaking of dwarfing the apple, says, "our Crab makes a good stock for this purpose." Does he refer to the Siberian Crab stock? Cannot some of your pomological readers give information in regard to this matter? A YOUNG DICER.

APPLES.—One of the samples sent us by Mr. HARRISON KEYES, of Ludlow, Vt., we should think the *Esopus Spitzenberg*. Some good judges were of the same opinion. This apple originated at *Esopus*, on the Hudson, and Mr. Downing says is unsurpassed as a dessert fruit. The other samples are *Russet Sweets*; but of what origin or name we are unable to say.

CANADIAN FARMER.—A beautiful paper in the quarto form, with the above title, is published monthly at Montreal. Unlike any agricultural periodical in the States, its pages are embellished with illuminated letters, descriptive of country scenery or farm husbandry. It is printed handsomely and conducted with ability. We are glad to find it upon our table.

We hope Mr. M. has at last made the grand discovery, and shall only charge him twenty per cent. for putting him in the way of obtaining the snug little premium which he claims, by sending his statement to His Excellency without delay.

We are almost sorry to mar the bright prospects of our friend who has made this discovery, but as faithful chroniclers feel bound to say, that, while we believe he is correct in stating that the potato rot is prevented where the vines are protected by buildings, shrubbery or fences, the same remedy has been suggested by others. Indeed, in an exceedingly interesting article on the same subject in another column of this paper, by Professor Horr, of Exeter, this remedy is alluded to in plain terms.

WORK, WORK.

I have seen and heard of people who thought it beneath them to work—to employ themselves industriously in some useful labor. Beneath them to work! Why, work is the great motto of life; and he who accomplishes the most by his industry is the most truly great man. Aye, and is the most distinguished man among his fellows, too. And the man who so far forgets his duty to himself, his fellow-creatures, and his God—who so far forgets the great blessings of life, as to allow his energies to stagnate in activity and uselessness, had better die; for, says the Holy Writ, "He that will work not, neither shall he eat." An idler is a cumberer of the ground; a weariness and curse to himself, as well as to those around him.

Beneath human beings to work! Look in the artist's studio, the poet's garret, where the Genius of Immortality stands ready to seal his works with her ineffaceable signet, and then you will only see industry standing by her side.

Beneath human beings to work! What but work has tilled our fields, clothed our bodies, built our houses, raised our churches, printed our books, cultivated our minds and souls! "Work out your own salvation," says the inspired Apostle to the Gentiles.—*Cornish Banner.*

WORKING DOGS.

In the search after industrial power and economy of human strength, it is wonderful that dogs are left so wholly unemployed in America. Their uses, in other countries, are thus described in a letter from Brussels:—

"Dogs, of almost every breed, are taught to work by the Germans. It looks odd enough to see these sagacious animals, of all descriptions, from the thick-headed bull-dog, and mild and intelligent Newfoundland, down to the candle-leg, half-hound and snappish rat-terrier, all fully employed, instead of lazing away their time as they do here. The majority of the dogs, however, are of the larger kind; and it is quite amusing to see their willingness to work, and the various ways in which they are employed. No person is presumed to use a wheelbarrow without a dog to draw the load, and in vehicles of this kind we saw loads of wood, milk, butter, cabbages, bricks, bread, mortar, and hot coffee, and refreshments for travellers. All the labor that the person behind had to perform, was to act as steersman, while the dog would draw

the load, and instantly stop when so ordered. We saw a few cases where the teamsters had become intoxicated and fallen asleep, and the teams had turned around to watch them."

For the New England Farmer.

PACKING MEAT.

MR. EDITOR:—I observe on the first page of your paper of the 20 inst., some remarks from Prof. Reinsque concerning packing meat for family use. We have had doubts many years whether saltpetre was healthful to the family, when used in the meat barrel, and should be glad to change the practice if we can do it without being in danger of losing our meat, or making it too salt. We were intending to butcher an ox to-morrow to lay down for next hay season; but have concluded to wait a week or two to learn something more on this subject. We hope you will publish in your next paper the most approved modern method of packing beef for family use. Truly yours, W.

West Farms, near Middlebury, Vt., Dec. 22.

REMARKS.—No corned beef is better than that salted in clear salt and water, provided it is to be used within three or four weeks from the time of salting. But when it is to be kept several months, something must be added to prevent the meat taking up too much salt. The tendency is for the meat to take up salt and exclude its own juices, thus leaving a hard, dry fibre, penetrated with salt, and about as nutritious and fit for the table, as a boiled heel-tap! We will give our friend a recipe for preserving beef, one which we have tested.

Let the meat be thoroughly cool, but not frozen; sprinkle the bottom of the barrel with clear Turk's Island salt, pack the pieces and sprinkle salt, and in this manner fill the barrel. Add to this 6 pounds of clean brown sugar, sprinkled upon the meat as you pack. This process is only for the cold weather, requires but little salt and the barrel must be kept in a cool place. As soon as the weather becomes warm enough to affect the meat it must be taken out, washed in cold water and put into new brine sufficiently strong to preserve it, adding two pounds of sugar, with cloves and allspice, if desirable.

The following is the recipe of one of the largest beef packers in Quincy market. Three pecks of Turk's Island salt and four pounds of sugar to a barrel of beef. He uses the three pecks of salt beside that used in making the brine.

LIVE FOR SOMETHING.—"Thousands of men," says Chalmers, "breathe, move and live—pass off the stage of life, and are heard of no more—why? they do not partake of good in the world, and none were blessed by them; none could point to them as the means of their redemption; not a line they wrote, not a word they spake, could be recalled; and so they perished; their light went out in darkness and they were not remembered more than insects of yesterday. Will you thus live and die, O man immortal!—Live for something. Do good, and leave behind you a monument of virtue."

For the New England Farmer.

PALMA CHISTL—CASTOR BEAN.

MESSENGERS. EDITORS:—In your paper of the 20th Dec., you ask, "will some one who has the knowledge, inform us whether any particular course of culture is necessary for the Castor Bean, what its product is per acre, and the best method of obtaining the oil."

Perhaps some person may answer your queries more accurately and fully than I can do. But as far as I am able, I comply with your request. The Castor Bean is one of the main products in the southern portion of Illinois, where I have resided. I have never cultivated it, however, and speak only from seeing it in the field and from the information of others. The mode of culture is much like that of corn; that is, it is planted in rows and hills. The tillage is also similar. The southern portion of the State, where the Castor Bean is raised, is inferior to the northern and middle portions in fertility. It is mostly a pretty stiff clay, or sometimes a clay loam. The same description of land that is used for corn and wheat, being hill lands. I cannot say what the product is per acre, though I think I have been told about thirty bushels. The oil is made in mills. The producer sells his product at the mills, at about one dollar per bushel, where the oil is pressed out. The pulp remaining after the extraction of the oil is used as a fertilizer, and I have been told is exceedingly good for that purpose. ILLINOIS.

THE AIR RENDERED VISIBLE.

The Paris correspondent of the Washington Republic says:—

"At the last sitting of the Academy of Sciences a very remarkable paper was read. It was presented by a well known engineer, M. Andraud, who has made many public experiments on compressed air as a substitute for steam on railways. I give you a *resume* of the contents of this paper. It is entitled *Eroscope*, or the Visibility of the Molecules of the air. Some of the deductions made, in a medicinal point of view, are in the highest degree curious. M. Andraud proves that, by a very simple contrivance, the air is rendered visible. By taking a piece of card, colored black, and piercing it with a fine needle, this interesting fact is established. If we look through this hole at the sky, on a fine day, or at a strong lamp, having a ground glass, we see a multitude of little transparent globes moving in the midst of confused nebulosities. These little globes, some of which are more transparent than others, are molecules of air. Some of them are surrounded with a kind of halo. These latter, says M. Andraud, are the elements of oxygen, whilst others are elements of azote. After continuing the observation for some time, we shall see small points detach themselves and disappear in falling; these, says M. Andraud, are atoms of carbon. This phenomenon of vision, it is essential to remark, passes within the eye itself; the molecules of air which are observed, are those which float in the liquid, which occupies the anterior part of that organ. According to the author of this paper, the discovery is not interesting merely as a phenomenon, but may be applied to important purposes in medicine. He says: 'The physician will one day make use of the *eroscope* as an important means of diagnosis. Vertigo, giddiness, which are

the forerunners of apoplexy, will be announced by perturbation in the molecules. Fever always exists when the molecules under the action of a magnetic current circulate on a vertical ground; sometimes in one sense, and sometimes in another; and, when this movement of gyration becomes more precipitate, the patient experiences the singular sensation of turning, as it were, upon a wheel of iron."

PRODUCT OF THREE AND ONE-THIRD RODS OF GROUND.

In the *FARMER & MECHANIC* of last week, we published an article showing what could be raised from *seven-eighths* of an acre of ground, since which we have witnessed a still more striking instance of the remarkable product of a mere "patch" of ground in a small back-yard in the city of Brooklyn. Our friend's yard contains at the present time, 16 bearing vines; 10 do. 2 years old, do.; 32 do. 1 year old, do.; 17 seedling, 1 and 2 years old; 45 bearing gooseberry shrubs; 19 bearing currants, do.; 24 raspberry; 24 gooseberries and currants, 1 year old; 30 apple and pear seedlings; 4 do. grafted; 3 cherries, grafted; 4 bearing peaches; 4 budded, do.; 20 roses; 120 bearing strawberry plants, winter greens, &c, &c., together with a glass frame with lettuce &c., &c.

Thus on an insignificant spot of just about *one forty-eighth* of an acre are found 75 vines, a part of which are bearing; 112 gooseberry, currant and raspberry shrubs; 45 fruit trees, together with strawberry plants, salad, &c., &c. This to our knowledge is a veritable fact, and may afford a hint to those who think a *very large farm* can only be cultivated with profit to the farmer. If any of our cotemporaries can give an instance of *miniature* husbandry exceeding this, we will try again.—*Farmer and Mechanic.*

ST. PAUL'S CLOCK.—A writer in the Foreign Quarterly thus describes the machinery of this great London clock:

"The pendulum is fourteen feet long, and the weight at the end is one hundred weight; the dial on the outside is regulated by a smaller one within; the length of the minute hand on the exterior dials is eight feet, and the weight of each seventy-five pounds; the length of the hour figures two feet and two and a half inches.

The fine-toned bell, which strikes, is clearly distinguished from every other bell in the metropolis, and has been distinctly heard at the distance of twenty miles. It is about ten feet in diameter, and is said to weigh four and a half tons. The bell is tolled on the death of any member of the royal family, of the lord mayor, Bishop of London, or dean of the cathedral.

The whole expense of building the cathedral was about a million and a half pounds sterling—in the United States currency, about six and two-thirds millions of dollars."

SUFFOLK PIGS.—We have just received, and shipped, three pigs of this breed from the famous stock of J. L. LOVING, Esq., of Hartford, Vt., which we ordered for a gentleman in Virginia. They arrived here in fine condition, and amply sustain the character we have given them before.



BLACK HAWK.

We present our readers with a portrait of the celebrated Morgan Horse, *Black Hawk*. He is of a jet black color; fifteen hands high, and is celebrated for symmetry, action, docility, endurance, loftiness in carriage, great speed and for the improvement of stock.

The reputation of this breed has been well-earned and is thoroughly established upon the basis of utility, and not of fancy; upon their power of sustaining long continued exertion, of health and vigor, enhanced by beauty of form and gentleness of disposition.

Their progeny commands the highest price in the market. They excel in great endurance, carrying weight a long distance; are full of noble and generous spirit, with such docility of temper that the most timid can drive them; but if put to their mettle they are a full band for the best driver. It is generally believed by those best able to judge of the merits of the horse, that this breed stands pre-eminent among all others. Their firm-set, yet active limbs and graceful carriage, always excite the admiration of the beholder, while the beaming eye and intelligent countenance reminds one of the fabled Centaur, half man and half horse, used among the ancient Thesalians in breaking their ferocious animals.

OVER THE \$10,000.

We have received a communication from Mr. T. D. Merrison, of Hill, N. H., in which he states that he has discovered the cause of the potato rot. His letter is directed to "His Excellency the Governor of the State of Massachusetts," and why he should desire it to pass through our hands before reaching that distinguished functionary, we do not know. At any rate, finding it in our mill, we will grind out a little of the wheat and then pass it along to the Governor! He says the disease is occasioned "by something that comes in a south wind," which poisons the tops and then descends to the tuber, and that anything that will shelter the vines from these winds will effectually preserve them. So he plants two or three kernels of corn on one side of each potato hill, and where he has done this has saved his crop.

Mr. M. was led to this important discovery on this wise. He built a shed fifty feet long, and on the north side of it planted an acre of potatoes. When they were up and presenting a handsome and vigorous appearance, there came a south wind which prevailed for three days in succession, and immediately after the tops appeared as "though a great fire had swept over them, excepting where the wind was kept off by the shed, and there they were sound and good."

ELECTION OF POSTMASTERS.

We are glad to see that Mr. Allen, of this State, has introduced a resolution in the House of Representatives, instructing the Committee on the Judiciary to report either an amendment to the Constitution, or if Congress in the opinion of said Committee has power to make the change, a bill providing for the election of postmasters by the voters of the towns in which they are located. We believe this movement to be a judicious one, and shall rejoice to see it carried out. The power and patronage entrusted to the executive department of our government are quite too great, and it is time something were done to curtail them. The evil has grown with the growth of the country, so that the administration of the present day has vastly more patronage under its control than was entrusted to the early Presidents. There are over *twenty thousand* postmasters in the United States, dependent upon the executive for their commissions; and when we consider the immense labor required to attend to these appointments, the annoyance caused by the hosts of applicants in every change of administration, and the difficulty of ascertaining whether these twenty thousand men, scattered in every village from Maine to California, are really honest, capable, and obliging, we think it must be admitted that the interests of the country would be benefited by the proposed change. We say, let the people elect their own postmasters, and see if the public are not better served, and if there is not less proscription for party sake than exists under the present system. It would not be necessary or desirable to change the postmaster of a place every year, and to avoid this, he might be elected for a term of three, four or five years. Which of the parties will add this reform to its creed, and hoist an elective postmaster banner!

MILCH COWS.

The following is the Report of the committee on Milch Cows submitted to the Middlesex Society at their Show in September.

Your Committee found in the pens eighteen Milch Cows; of these, two very fine animals, one a Devon and the other an Ayrshire, owned by Wm. Spencer, Esq., of Lowell were offered for exhibition only: of the remaining sixteen, seven, (among which were some animals of handsome appearance,) were unaccompanied with the written statements necessary to entitle the owners to premiums.

Of the remaining nine, one only was an Ayrshire, a noble creature, to the owner of which, Peter Lawson, Esq., of Dracutt, we awarded the first premium for Ayrshires, of eight dollars; this cow, according to the owner's statement, has given an average of sixteen quarts per day during the season, without grain.

Of the remaining eight, four were native breed, two were Durham, one was native and Durham,

and one native and Ayrshire—and, as claiming a premium, were all classed as native. They were all "fat fleshed," "well favored kine," to all which, if it had been possible, your committee would have been pleased to give premiums.

We selected for the first premium of eight dollars, a cow, owned by Alexander Wright, of Lowell, from whose statement it appears that this cow is nine years old—calved early in January, 1850, and from the 10th of that month to the 20th of August, 1851, gave nine thousand and twenty-seven quarts of milk, common milk or beer measure; the greatest quantity in one day was twenty-one quarts and one gill—weight per quart of milk, two pounds. Milk is rich in cream, seven quarts of milk producing one pound of butter.

During winter and part of the summer this cow is fed morning and evening as follows: one quart of Indian meal and one quart of shorts, with one gill of malt with boiling water poured on them and cooled. In winter she has a peck of carrots daily at noon in addition.

To the second premium of six dollars, we selected a cow owned by James Tuttle, of South Acton. The Committee considered the cow of Durham breed,—according to the owner's statement, she calved August 30th, 1850, and from that date to Feb. 28th, 1851, she gave two thousand nine hundred and seventy quarts of milk, good grass feed only in summer—in winter two quarts of Indian meal per day and good hay; she is seven years and three months old. For the third premium, we selected a cow owned by Elijah M. Read, of Tewksbury. This cow is eight years and three months old. Calved Feb. 8, 1851, and, as appears by the owner's statement, yielded, from Feb. 12, 1851, twenty-five hundred and seventy-two and three-quarters quarts of milk. Butter of excellent quality produced one pound from $\frac{5}{8}$ quarts of milk.

No Devons were offered for premiums. All which is submitted, in behalf of the Committee.

Signed, LILLEY EATON, *Chairman.*

SINGULAR FACT.—On the premises of N. Currier, Esq., of Canaan, N. H., we lately saw an apple tree which exhibited a peculiarity which we have never read of or witnessed. The trunk was about one foot in diameter, perfectly sound and smooth, and without any indication either in itself or the roots, of having sprung from two stocks. Some years ago Mr. Currier grafted the entire top with the "Nodhead" apple, which he procured in Plymouth, though the fruit originated in Hollis, as we have been informed, in the orchard of Rev. Mr. Emerson. The grafts were taken from one tree, and inserted at the same time; and yet one half of the top bears one year and the other half the next, and this without variation. How is the fact to be accounted for? Mr. Currier tells us it is a convenient arrangement, since now he is sure of a supply of fine apples every year.—*Cong. Journal.*

Wheat in Vermont.—The Bradford, Vt., Gazette says that Mr. William Waterman, of that town, raised, the past season, seventy bushels of winter wheat on two and one fourth acres of land; the wheat will average forty-five and one half pounds of flour to the bushel. The seed before sowing was soaked in strong lime-water. The land was not manured, but deeply plowed.

Horticultural.

NEW PEARS FROM ANGERS, FRANCE.

We copy from Hovey's Horticultural Magazine for January the following extracts from an article relating to a fine collection of Pears, recently received by the Massachusetts Horticultural Society, from the other side of the Atlantic:

The facilities of steam navigation are beginning to be felt in the diffusion of pomological information. Heretofore we could only import with safety fruit trees of various kinds, and patiently await their fruiting before we could decide whether we had obtained the correct kinds; and even then, we were not certain as to the results; for the great similarity of many kinds renders a mere description of the fruit of only comparative value. With the rapidity of steam communication, however, we are now enabled to interchange specimens with foreign cultivators, and thus settle all doubts regarding the identity of varieties; and not only this, but we can learn the value of the newer sorts immediately, by the inspection and trial of the fruit, without waiting for the tree to bear. The first instance of this kind, on anything of an extensive scale, has been the receipt by the Massachusetts Horticultural Society, of upwards of 175 varieties of fruits, sent by A. Leroy, nurseryman of Angers, France. They embraced 116 of pears, 36 of apples, and 19 of other small fruit, including nuts. The package containing them was sent to Liverpool, to be forwarded to Boston, to the care of Messrs. Hovey & Co.; but from some cause, it had laid over a week or more in the former place, and then went to New York, from whence it was forwarded to Boston. But, notwithstanding this delay, many of the pears and apples came to hand in perfect order, and enabled the committee to examine the kinds, and test the quality, of such of the new ones as were in fine condition.

We have not time now to enumerate all these kinds. The specimens were, some of them, very fine, but no better than those of the same kinds which have been exhibited by our own amateurs and nurserymen. The Uvedale's St. Germain weighed 24 ounces. To us, the result of the expedition proves that we can, as Mr. Lowell has said, raise as fine pears "in this State" as the "world produces."

THE USE OF FRUIT.—Instead of standing in any fear of a generous consumption of ripe fruits, we regard them as positively conducive to health. The very maladies commonly assumed to have their origin in the free use of apples, peaches, cherries, melons and wild berries have been quite as prevalent, if not equally destructive, in seasons of scarcity. There are so many erroneous notions entertained of the bad effects of fruit, that it is quite time a counteracting impression should be promulgated, having its foundation in common sense and based on the common observation of the intelligent. We have no patience in reading the endless rules to be observed in this particular department of physical comfort. No one, we imagine, ever lived longer or freer from the paroxysms of disease, by discarding the delicious fruits of the land in which he finds a home. On the contrary, they are necessary to the preservation of health, and are therefore

caused to make their appearance at the very time when the condition of the body, operated upon by the deteriorating causes not always understood, requires their grateful, renovating influences.—*Boston Med. and Surg. Journal.*

A CHALLENGE TO HORTICULTURISTS.—Five years ago I began to set an orchard. This fall I took from one Baldwin tree three bushels and a half of apples like the sample I send you; from a Rhode Island Greening, two and a half bushels; from a Roxbury Russet, a half bushel—all like the samples sent. The manner of cultivating my trees is set forth in a pamphlet I published this fall. I further challenge the United States to produce so fine samples of peach, cherry, plum, pear, apricot and nectarine trees, for the time they have been set. The apples, when transplanted in the orchard, were about six or seven feet high; cherries the same; peaches were maiden plants. The orchard contains 1200 peach, 1500 pear, 200 cherry, and 200 apple trees. I sold from five peach trees \$25 worth.—*Genesee Farmer.*

FLOWERS IN WINTER.—Last year one of my little girls took an old tin milk pan, filled it with earth, and set it full of garden violets, which flowered all winter. This fall I have taken another, (I would prefer a deeper vessel,) perforated it with holes, set up a stalk in the centre, and surrounded it with young violets that have just begun to blossom, and already I have quite a handsome little flower-garden. The lovers of violets will be well paid by a similar arrangement.—*Ibid.*

Down East, 1851.

Mechanics' Department, Arts, &c.

SUBMARINE RAILROADS.

This is the age of discoveries and inventions, and he would be fool-hardy who pronounces any project chimerical, however astounding it may appear. A gentleman of London, named Hector Horeau, has proposed to build a sub-marine railroad between France and England. The plan is to construct a tube of strong plate iron, and place it on the bottom of the channel, which is twenty-one miles wide, between the two countries, and the water is not deep between the Straits of Dover. It is proposed to propel the carriages by stationary engines at the end of the tube. It is proposed to have strong glass windows in the tube, to light it up by day, and at night it can be easily lighted with gas. Air can be forced through it so as to keep the atmosphere always pure. A light-house placed on each coast, and a number of floating buoys, will indicate the track of the tube, above the water, so as to prevent mariners casting anchor near it. The editor of the *Scientific American*, whose opinion is entitled to great weight, says "the plan appears to be feasible, and we hope it will be carried out, and add a new tribute to the genius and skill of the civil-engineer—England's master-spirit."

A sub-marine bridge of the description named, though on a smaller scale, has also been projected by another engineer. Mr. Cunningham, architect, of Liverpool, has submitted a project to the directors of the various railway companies interested in the communication between Birkenhead and Liver-

pool, for a railway to cross the Mersey, and thus connect Birkenhead and Liverpool, for all kinds of transit.

Mr. Cunningham proposes to sink an iron tube in the bed of the river, buried so completely below the surface thereof that there would be no more obstruction to the currents than at present. The tube would have perpendicular sides and an arched roof. It would be placed in a prepared bed, and would be protected outwardly by various contrivances. Internally there would be two lines of rails running on each side of the tube, with a passage in the middle for pedestrians. The entire work, it is estimated, would not cost more than £250,000.—*Boston Journal*.

CHIMNEYS.

Of all the minor evils which flesh is heir to, there are few which so certainly bring tears into every one's eyes as smoky chimneys. A man of nerve may steel his heart against a great misfortune; he may make no outward signs at the recital of griefs which would rouse a stoic; but take him into a room where the chimney does not draw well, and though he may be, like Othello, "Unused to the melting mood," he will find himself exhibiting all its outward signs, while his heart, strange to say, is growing harder every moment.

That both country and town houses are more or less afflicted with this nuisance is abundantly proved by the chimney pots and ventilators—odious in the eyes of architects—which deform the tops of so many chimneys every where; and there can be no doubt that the multiplication of stoves in parlors and sitting-rooms, of late years, is also owing, in no small degree, to the apparently unavoidable evil of smoky chimneys. Is there any certain remedy for this evil? We answer yes. The difficulty arises, in almost every instance, solely from want of knowledge of the first principles of construction, in the bricklayer who builds the chimney. We have conversed with dozens of mechanics, and have found but two who knew anything of the principles in the matter, or whose practical knowledge did not actually lead them to build chimneys that must inevitably smoke, in every situation exposed to downward currents of air.

The reason why chimneys draw at all, is the natural tendency of heated air to rise; smoke being much lighter than common air. Hence, the warmer the flue, and the smoke which it contains, the better the draught. For this reason a fire lighted in a cold chimney in an interior wall of a house, is more likely to draw well than one built in the exterior wall—the cold of the open air robbing the chimney of a part of its heat.

The cause of smoky chimneys, however, is their imperfect construction at the throat and the top. If a flue, as is most commonly the case, is built of uniform size, from the throat where the smoke enters to the top where it escapes, it is evident that there is a column of heated air in the flue of uniform size from top to bottom. Whatever offers resistance to this column at the top acts equally upon the whole, because the size of the column of smoke at the top is precisely that at the bottom. Now the resistance is that of a current of wind upon the top of the chimney. Every time this current of wind strikes, in a direction more or less

downward upon the top of the chimney, a quantity of smoke is driven out of the throat below.

Let us now suppose that with a flue of the same diameter, both the top and the throat are contracted. The effect of this, in the first place, is to break the force of the adverse current of wind; and in the second place, to divide the shock between the size of the opening at the top and that of the whole column of heated smoke in the flue. The effect this will have may be illustrated by supposing a canal, with a gate or opening at the end. Raise this gate across the whole width of the canal—the water flows out. Stop the gate suddenly, and we give a backward motion to the water, in the whole breadth of the canal, many feet distant; but stop it by a gate only half the width of the opening, and we diminish this shock greatly. Now make another narrow passage the width of the small gate, fifty feet behind the gate, and we shall find that the shock of shutting the gate divides itself in a great degree among the particles of surplus water, which makes the difference between the mouth of the gate and the width of the canal behind it. Let the first gate represent the construction at the top of the chimney, and we have the parallel.

The principle, then, of building chimneys to draw well, is to contract the openings both at the throat and the top, so as to break the force, with which the wind (or even the air itself in some states of the atmosphere) opposes the ascent of the smoke.—*A. J. Downing*.

A PERFORATING MACHINE.—The tunnel of the Troy and Greenfield Railroad, through the Hoosac mountain, is made with one of Wilson's stone-dressing machines. This machine is worked with a steam engine, and will enter from six to fifteen linear feet per day. The cutters are circular plates of cast-steel, of 14 inches diameter, half an inch thick, and ground, with a bevel on each side to an edge. They are placed on the rock, at the angles of about 45 degrees, and roll over the surface with great rapidity. The edge is pressed into the rock with great force and acts as a wedge, prying up and throwing off the rock in a surprising manner. A block of granite, ten feet long and four feet wide, was placed on a carriage, and submitted to a single cutter, guaged to cut two inches from its surface. It passed over the entire stone in 22 minutes, and cut off 1600 lbs. of rock, leaving the same as smooth as any hammer-dressed stone.—*Albany Argus*.

IRON BUILDINGS.—Brick, says the Philadelphia Dispatch, is cheaper than iron for buildings; iron is cheaper than brown stone, and the latter is cheaper than marble. Iron is yet a new material. The patterns for castings are the most expensive parts of the cost. After a while, when an infinite variety of patterns are made, which will suit all tastes, iron will be as cheap as brick.

NEW PATENTS.—Week ending Dec. 16. Elihu and Warren W. Butcher, of North Bennington, Vt., for improvement in weavers' temples. David H. Richards and Joseph F. Flanders, of Newburyport, Mass. for improvement in rotating tumbler locks. Joseph W. Thorp, of South Ware, N. H., for improvement in apparatus for pressing garments.

Ladies' Department.

DOMESTIC RECEIPTS.

PUMPKIN PUDDING, No. 1.—A quarter of a pound of butter, sugar to the taste, eight eggs, two table-spoonsful of brandy, one tea-spoonful of cinnamon, one tea-spoonful of grated nutmeg, one pint of mashed pumpkin. Stew the pumpkin in very little water, mash it fine, and add the butter to it whilst it is hot; whisk the eggs and stir into the pumpkin when it is cool enough, and add the other ingredients. Bake in a light paste.

PUMPKIN PUDDING, No. 2.—Eight eggs, one pint of stewed pumpkin, a quarter of a pound of butter, a quarter of a pound of sugar, two table-spoonsful of brandy, one tea-cup full of cream, one tea-spoonful of cinnamon, one tea-spoonful of nutmeg. Stew the pumpkin in very little water, mash it very fine, add the butter, and stand it away to cool. Beat the eggs, and when the pumpkin is cool add them and the other ingredients. Line your pie-plates with paste, pour in the pumpkin, and bake in a moderately hot oven. When they are to be sent to the table, sift sugar over them.

QUINCE PUDDING.—Six ounces of mashed quinces, half a pound of butter, half a pound of sugar, five eggs, a table-spoonful of brandy. Stew the quinces, mash them very fine, and when nearly cold add to them the butter and sugar beaten to a cream. Whisk the eggs very light and stir in with the other ingredients. Cover your pie-plates with a nice paste, pour in the mixture and bake it.

FRENCH CUSTARD PUDDING.—One pint of milk, one table-spoonful of flour, three eggs, sugar to the taste. Flavored with rose-water, essence of lemon, or brandy. Put on the milk to boil, mix the flour smoothly with a little cold milk; as soon as the milk boils stir in the mixture of flour and milk. Let it boil one minute, take it off and set away to cool. Beat the eggs, and when the milk is cool add them to it with the sugar, then the spice and rose-water, or whatever it is to be flavored with. Line your pie-plates with paste, pour in the above mixture, and bake it in a moderate oven.—*The National Cook-Book.*

THE GOOD WIFE.

The power of a wife for good or evil is irresistible. Home must be the seat of happiness, or it must be for ever unknown. A good wife is to a man wisdom and courage, and strength and endurance. A bad one is confusion, weakness, discomfort, and despair. No condition is hopeless, when the wife possesses firmness, decision and economy. There is no outward prosperity which can counteract indolence, extravagance, and folly at home. No spirit can long endure bad domestic influence. Man is strong, but his heart is not adamant. He delights in enterprise and action; but to sustain him he needs a tranquil mind and a whole heart. He expands his whole moral force in the conflicts of the world. To recover his equanimity and composure, home must be to him a place of repose, of peace, of cheerfulness, of comfort; and his soul renews its strength again, and goes forth with fresh vigor to encounter the labor and troubles of the world. But if at home he finds no rest, and there is met with bad temper, sullenness, or gloom, or is assailed by discontent, or complaint, or reproaches, the heart breaks, the

spirits are crushed, hope vanishes, and the man sinks into despair.

PARENTAL TEACHING.—If parents would not trust a child upon the back of a wild horse without bit or bridle, let them not permit him to go forth unskilled in self government. If a child is passionate, teach him by gentle means to curb his temper. If he is greedy, cultivate liberality in him. If he is selfish, promote generosity. If he is sulky, charm him out of it by encouraging frankness and good humor. If he is indolent, accustom him to exertion, and train him so as to perform even onerous duties with alacrity. If pride comes in to make his obedience reluctant, subdue him, either by counsel or discipline. In short, give your children the habit of overcoming their besetting sins. Let them acquire from experience that confidence in themselves which gives security to the practised horseman, even on the back of a high strung steed, and they will triumph over the difficulties and dangers which beset them in the path of life.

FARMER'S APPLE PUDDING.—Stew some tender apples; if the apples are juicy, they will require very little water to cook them; add to one pound of the mashed apple, whilst it is hot, a quarter of a pound of butter, and sugar to the taste. Beat four eggs and stir in when the apple is cold.

Butter the bottom and sides of a deep pudding dish, strew it very thickly with bread crumbs, put in the mixture, and strew bread crumbs plentifully over the top. Set it in a tolerably hot oven, and when baked, sift sugar over.

This is good with a glass of rich milk.

It is a good substitute for pie, and can be eaten by those who cannot partake of pastry.—*National Cook Book.*

ECONOMICAL USE OF NUTMEGS.—If a person begins to grate a nutmeg at the stalk end, it will prove hollow throughout; whereas the same nutmeg, grated at the other end, would have proved sound and solid to the last. This circumstance may thus be accounted for: The centre of a nutmeg consists of a number of fibres, issuing from the stalk and its continuation through the centre of the fruit, the other ends of which fibres, though closely surrounded and pressed by the fruit, do not adhere to it. When the stalk is grated away, those fibres, having lost their hold, gradually drop out in succession, and the hollow continues through the whole nut. By beginning at the contrary end, the fibres above-mentioned, are grated off at their core end, with the surrounding fruit, and do not drop out and cause a hole.

HINT TO PARENTS.—Few parents realize how much their children may be taught at home by devoting a few minutes to their instruction every day. Let a parent make a companion of his child, converse with him familiarly, put to him questions, answer inquiries, communicate facts, the result of his reading or observation, awaken his curiosity, explain difficulties, the meaning of things, and the reason of things—and all this in an easy, playful manner, without seeming to impose a task, and he himself will be astonished at the progress which will be made. The experiment is so simple that none need hesitate about its performance.

TO MAKE PRESERVES KEEP.—The secret of preserving them from change is to exclude the air. The easiest way to do this is, to brush over a sheet of paper with the white of an egg, and cover the jar, pressing it down around the edges while moist, and it will cement perfectly tight. It is cheaper, neater and better than sealing up the mouth of the jar with wax or covering it with bladder.

Boy's Department.

A JOVIAL FARMER'S BOY.

O, a jovial farmer's boy I'll be,
As fresh as the birds that sing,
And carrol my merry song of glee
Among the flowers of spring.

O, I would not live in the crowded town,
With its pavement hard and gray,
With its lengthy streets of dusty brown,
And its painted houses gay—

Where every boy his ball may bound
Upon his neighbor's dome,
And every shout and every sound
Disturb some other's home.

The squirrel that leaps from limb to limb,
In the forest waving high,
Or the lark that soars with his matin hymn,
Is not more free than I.

Then give me the trade of a farmer boy,
From city trammels free,
And I'll crack my whip, and cry "Who hoy!"
O, a farmer's boy I'll be!

A CAUTION TO BOYS.

To continue the war against the tobacco-using propensity observed to be very strong of late among boys, we offer an additional fact. A few weeks ago, a youth of sixteen arrived in this city to prosecute his studies with a view to professional life. He came from a distant State, and was to remain here for some years. A week or two after his arrival, he was seized with a paralysis in both legs, which advanced upward till nearly the lower half of his body was benumbed and apparently lifeless. The most distinguished physicians in New York attended the case, but no relief being afforded, the unfortunate young man has been taken on his way home, and there is but little hope of his recovery. The cause of his disease is stated by the physicians to be *tobacco-chewing*—a habit which he early acquired, and persisted in to the time of his attack. —*Home Journal*.

PLAYING TRUANT.

We never knew a boy who was in the habit of playing truant, and wasting the golden hours of youth, to become a great and distinguished man. Most often the idler of early life is the laggard in the world's race. Happy the boy whom parental or friendly care saves from this danger of youthfulness.

"The reason why truancy is so serious an evil, is not the loss of a day or two at school now and then,—or any other immediate and direct consequence of it. It is because it is the beginning of a long course of sin; it leads to bad company and to deception, and to vicious habits; it stops the progress of preparation for the duties of life, and hard-

ens the heart, and opens the door for every temptation and sin, which if not closed must bring the poor victim to ruin. These are what constitute its dangers."

These words, written by a learned and good man, it would be wise for every child to ponder well. The fairest day would not then entice them, the merriest companion persuade them, nor the hardest lesson affright them from this path of duty.—*Cambridge Chronicle*.

CATECHISM OF FAMILIAR THINGS.

What is Iron?

One of the most useful and abundant metals; being found in all mineral earths, and stones; in plants, and animal fluids; and is the chief cause of the varieties of color in all. Iron is found in great masses, in various states, in the bowels of the earth; it is usually, however, compounded with stone, from which it is separated by the action of fire. In some parts of the world, whole mountains are formed of iron; among these may be mentioned the Pilot Knob and the Iron Mountain, in Missouri, being unsurpassed by anything of the kind found elsewhere.

What are its characteristics?

It is hard, fusible, not very malleable, but extremely ductile, and very tenacious; it is of a greyish color, and nearly eight times heavier than water. Without iron, society could make no progress in the cultivation of the ground, in mechanical arts or trades, in architecture or navigation; it is therefore of the greatest use to man. Iron tools have been used in all European countries as long as their histories have existed; this metal appears likewise to have been known and used by the inhabitants of the world in the earliest ages, being frequently mentioned in the Holy Scriptures. In the fourth chapter of Genesis, Tubal-cain is spoken of as the "instructor of every artificer in brass and iron," and thus their existence was evidently known at that early period of the world.

INFANTINE COURAGE AND GENEROSITY.—Two bulls of equal bravery, although by no means equally matched in size and strength, happening to meet near the front of a laird's house in the Highlands of Scotland, began a fierce battle, the noise of which soon drew to one of the windows the lady of the mansion. To her infinite terror, she beheld her only son—a boy between five and six years of age—belaboring with a stiff cudgel the stouter of the belligerents. "Dougald, Dougald, what are you about?" exclaimed the affrighted mother. "Helping the little bull," was the gallant reply.

LYING.—Lying supplies those who are addicted to it with a plausible apology for every crime and with a supposed shelter from punishment. It tempts them to run into danger from the mere expectation of impunity; and when it is practised with frequent success, it teaches them to confound the gradations of guilt, from the effect of which, there is, in their imaginations at least, a sure and common protection. It corrupts the early simplicity of youth; it blasts the fairest blossoms of genius, and will, most assuredly, concentrate every effort by which we may hope to improve the talents and mature the virtues of those whom it infects.

TO ALL AGRICULTURISTS, Horticulturists and Florists.

THE following Valuable Books have just been published by
JOHN P. JEWETT & CO., 17 and 19 Cornhill, Boston:

BRECK'S BOOK OF FLOWERS,

Being a complete guide to the cultivation of a Flower Garden;
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Christmas & New Year's Presents.

BOOKS, STATIONERY, FANCY GOODS AND
PERFUMERY.

THE subscriber has just received a fresh assortment of Goods as above, adapted to the coming season, to which he invites the attention of the public. Those in the habit of purchasing in Boston, will find it to their advantage to call and examine his stock, which is larger and more varied than any ever offered before in this vicinity. Most of the Books having been purchased at the Trade Sales, can be sold at much less than the usual prices. The stock consists in part of

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The subscriber likewise has in connection with the store a CIRCULATING LIBRARY, to which, if sufficient encouragement is given, will be added all new works of interest as soon as published. Any one can take Books out at the rate of two dollars a year, or four cents a week per volume.

Concord, Mass., Dec. 13, 1851.

ALBERT STACY.
50—4w1s

Corn Shellers.

IMPROVED YANKEE CORN SHELLERS, with and without separators. These machines are adapted to large and small varieties of corn, will shell rapidly, and are not liable to get out of order. For sale, wholesale and retail, over Quincy Market, Boston, by

March 1.

RUGGLES, NOURSE, MASON & CO.

2—t

The Working Farmer.

A MONTHLY Periodical devoted to Agriculture, Horticulture, Floriculture, Kitchen Gardening, Management of Hot Houses, Green Houses, &c., embracing Agricultural Chemistry, Preparation of Manures, &c.
Edited by PROFESSOR JAMES J. MAPES, and published at 25 Cliff Street, New York.

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Jan. 1, 1852. 2t*

Farm and Nursery for Sale.



The subscriber offers his Farm and Nursery for sale, situated in WESTFORD, Mass., half a mile from the centre of the town, on the main road, and seven miles from the city of Lowell. Said Farm contains about sixty acres of land, consisting of Tillage, Pasturing and Woodland. Said Farm is pleasantly situated within half a mile of the Stony Brook Railroad Depot, and Grist and Saw Mill, and half a mile from the Meeting-house, Academy and Town School. There is in said Nursery about 2,000 Trees, from one to three years on the bud, consisting of Apple, Peaches, Pears, Plums and Cherries; also, Forest Trees, all in good thriving condition.

The buildings are all new and convenient. There is no nursery within seven miles, which gives it a pre-eminence over many other places. The purchaser can have all or part of the land attached to the buildings and nursery, and the conditions of payment will be made satisfactory.

For further particulars inquire at this office, or of ELISHA BUNCE, or the subscriber, living on the premises.

SOLOMON RICHARDSON.

Westford, June 28, 1851.

26—t

Farm for Sale.



A Farm situated in the most pleasant part of the town of BROOKLINE, N. H., containing 40 acres of good land, well divided into mowing, pasture and tillage. The mowing land has all been laid down within five years, and bears a heavy crop, which will continue to increase. The pasturing is equal to any, and is irrigated by a running brook. The tillage land is under a high state of cultivation, and needs only to be seen to be admired. The buildings consist of a good house, two barns, and all necessary out-buildings, in good repair. Also, a good orchard of grafted fruit, with Cherry, Pear, Quince, Peach and Plum trees.

The above will be sold low, as the health of the owner will not stand the labor of a farmer's occupation.

Application may be made to JOSEPH SHARLAND, at 334 Washington Street, Boston, or on the premises to

THOMAS BOWTHORPE.

For Sale Cheap,



A Farm situated in HOPKINTON, Mass., about 3 miles from Southboro' Depot, containing about 70 acres of land, suitably divided into mowing pasture and tillage, with from 15 to 20 acres of wood land, young growth, mostly pine and maple. There is on the Farm a good two-story house, barn, &c., 2 good wells of never failing water, and a small brook running near the house.

There is about 15 acres of meadow that might easily be converted into good English grass land; nearly the whole is fenced with a stone wall. The farm is somewhat run down, but it is in first rate condition for the purchaser, as its value can be greatly increased by making a few improvements.

For further information apply at the office of the New England Farmer.

41—t

Farm for Sale in South Reading.



A small Farm, containing twenty-three acres, with good buildings thereon, will be sold at a bargain. Terms made satisfactory.

Apply to Benj. Cox, Esq., near the premises, or
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26 and 28 Central St., Boston.

42—t

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A LARGE lot of patent malleable iron Spring Bow-Pins, of superior quality and finish, just received and for sale at the Quincy Hall Agricultural Warehouse, (over the Market,) by

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43—t

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CLARENDON HARRIS, Secretary.

Dec. 27, 1851.

ist^h

AYER'S CHERRY PECTORAL,

FOR THE CURE OF

Coughs, Colds, Hoarseness, Bronchitis, Whooping Cough, Croup, Asthma and Consumption.

THIS remedy is offered to the community with the confidence we feel in an article which seldom fails to realize the happiest effects that can be desired. So wide is the field of its usefulness and so numerous the cases of its cures, that almost every section of the country abounds in persons, publicly known, who have been restored from alarming and even desperate diseases of the lungs, by its use. When once tried, its superiority over every other medicine of its kind is too apparent to escape observation, and where its virtues are known, the public no longer hesitate what antidote to employ for the distressing and dangerous affections of the pulmonary organs, which are incident to our climate. And not only in the formidable attacks upon the lungs, but for the milder varieties of Colds, Coughs, Hoarseness, &c., and for Children it is the pleasantest and safest medicine that can be obtained. No family should be without it, and those who have used it never will.

HEAR THE PATIENT.

HANOVER, OHIO, April 3, 1850.

Dear Sir:—I wish I could tell all that suffer with a cough, what your Cherry Pectoral has done for me. It does seem they might be benefited by the information. I had a lung fever, which left my lungs weak and inflamed. Being very feeble, and unable to gain strength at all, my friends thought I must soon sink in consumption. I had no appetite, and a dreadful cough was fast wearing me away. I began to take your beautiful medicine, by the advice of a clergyman, who had seen its effects before. It eased my cough at first, and gave me rest at night. In less than a fortnight I could eat well, and my cough had ceased to be troublesome, my appetite returned, and my food nourished me, which soon restored my strength. Now, after five weeks, I am well and strong, with no other help than your Cherry Pectoral.

Yours, with respect,

JULIA DEAN.

I hereby certify that the above statement of my wife is in conformity with my own views of her case and her cure by Ayer's Cherry Pectoral.

JOSEPH DEAN.

The above-named Joseph Dean, and Julia, his wife, are personally known to me, and implicit confidence may be placed in their statement.

SAMUEL C. VAN DERWENT,

Pastor of the Baptist Church.

FROM ONE OF THE FIRST PHYSICIANS IN MAINE.

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I invariably recommend its use in cases of consumption, and consider it much the best remedy known for that disease.

Respectfully yours,

I. S. CUSHMAN, M. D.

PREPARED AND SOLD BY JAMES C. AYER,

Practical Chemist, Lowell, Mass.

Nov. 1, 1851.

44—3m

Agricultural Warehouse and Seed Store,

Quincy Hall, over the Market, Boston.

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Improved Sod Ploughs, for flat furrows—Improved Scotch Ploughs, for lapped furrows—Improved Stubble Ploughs, which are especially adapted to deep tillage, or varying from 6 to 12 inches in depth.

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RUGGLES, NOURSE, MASON & CO.

Boston and Worcester, Mass., March 1, 1851.

10—tf

Pure Devon Stock.

COWS, HEIFERS, BULLS and BULL-CALVES for sale. Apply at Office of N. E. Farmer, or to the subscriber.

B. V. FRENCH,

Dec. 27, 1851.

1yr*

Braintree, Mass.

Milk Farm for Sale.

The subscriber offers his Farm for sale, in CONCORD, Mass. It is situated about five minutes ride south-east of the village, on the old Boston turnpike. It contains about 150 acres of land, conveniently divided into lots for mowing, tilling and pasture. Several large fields near the buildings are rich bottom land, producing heavy crops of grass. About 75 tons of hay were cut the present year, and there is pasture sufficient for 15 cows, who go into directly from the yard, 20 cows are now kept on the farm, and there is a constant demand for milk. There is a variety of fruit, such as Peaches, Apples and Quinces. The buildings are a large two story house, with convenient out buildings, and a barn 70 by 40 feet, with a cellar 9 feet high under it. Opposite these buildings is a new two story house, built in modern style, containing two handsome parlors, two kitchens, with boilers set, a good cellar, and every convenience desirable. There is plenty of water at the buildings and every other part of the farm. The land is all good and a portion of it of very superior quality. Also, 40 acres of good pasture land in Carlisle, 4 miles distant, will be sold if wanted. This farm affords many advantages to those wishing to engage in the milk business or that of raising stock, and is offered for sale in consequence of the failing health of the subscriber.

The new house and twenty-five acres of land will be sold separately, if desired.

The terms will be made easy and possession given on the 1st of April next.

For further information enquire at N. E. Farmer office or of the subscriber on the premises.

Nov. 15, 1851.

AUGUSTUS TUTTLE.

46—tf.

Garden Seeds.

WE respectfully solicit the attention of purchasers of GARDEN SEEDS to our extensive stock, which we offer for sale. We have all the sorts of Vegetable Seeds that have proved worthy of cultivation; also, Grain, Grass and Flower Seeds. All the varieties are raised and selected expressly for our trade, and we do with confidence recommend them to all who desire to procure seeds that will prove true to their names.

Catalogues gratis, on application.

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33—tf

Early June Potatoes.

THIS fine variety is fit for the market by the middle of June, as its name indicates. Unlike any other potato, it is as mealy at that season as the Mercer in midwinter. Its eye is good and it also produces as abundantly as the Mercer. They will be delivered on board of any vessel in New York at \$4 per barrel of 2½ bushels.

Address S. B. PARSONS, Flushing, near N. Y.

Jan. 3.

2w*

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Fruit Trees.



The proprietors offer for sale a large and fine stock of Fruit, and Ornamental Trees, Shrubs, Buckthorn Plants &c.

Pear, Apple, Peach, Cherry and Plum Trees of choice standard varieties. Also Quinces, Gooseberries, Currants, Raspberries, Strawberries, Grape Vines, &c.

Extra sized Hamburgs for the Conservatory or Grapery. A fine lot of Cherry and Apple Trees, two to four years from bud. The whole for sale at reduced prices.

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To prevent any misunderstanding, we quote the 15th section of the law of 3d March, 1845, which is as follows:

Sec. 16. And be it further enacted, that the term "Newspaper," herein before used, shall be, and the same is hereby defined to be, any printed publication, issued in numbers, consisting of not more than two sheets, and published at short stated intervals of not more than one month, conveying intelligence of passing events, and *bona fide extras* and supplements of such publication.

PROSPECTUS FOR 1852.

NEW ENGLAND FARMER,
WEEKLY, &

AN INDEPENDENT JOURNAL,—PUBLISHED EVERY SATURDAY, ON A LARGE, HANDSOME FOLIO SHEET.

The proprietors design furnishing a first-class Agricultural and Family Newspaper—a journal which shall be valuable to the Farmer, the Mechanic, and all other professions; and at the same time, equally welcome to the Home Circle. They are happy in announcing the names of SIMON BROWN as Editor, and FREDERICK HOLBROOK and HENRY F. FRENCH, Associate Editors,—gentlemen who have had practical experience on their own farms, and who are too well known by the public to require any farther introduction or recommendation from us.

Besides the main subject of Agriculture, will be included Horticulture, Floriculture, Arboriculture, and the various sciences connected with these branches, such as Geology, Chemistry, Botany, Meteorology, Zoology, &c. Rural Architecture, Landscape Gardening, Rural Embellishments, Domestic Economy and Mechanic Arts will also claim particular attention.

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The other departments of the paper, under the charge of WILLIAM SIMONDS, will include a full and careful report of the news of the week, such as Domestic, Foreign and Marine Intelligence, Congressional and Legislative proceedings, Temperance and Religious Intelligence, and a general variety of Literary and Miscellaneous matter, adapted to family reading, comprising more useful and valuable reading matter than any other Agricultural Newspaper published in New England. Everything of a hurtful or even doubtful tendency will be carefully excluded from its columns.

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SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.**FARM WORK FOR FEBRUARY.**

LATE SPRING.—The soft and mild spring weather, such as the farmer likes for plowing, planting, sowing, and gardening, is so indefinitely postponed of late years, that it crowds much of spring work into early summer, unless we take Old Time by the forelock and accomplish our business without much regard to his blustering behavior.

NOW IS THE TIME.—In order to be ready for the sunny days when they do come, we must bestir ourselves now by hauling off the timber to market which has been prepared; chopping wood, and fitting it for the fire; by preparing stakes, rails, posts, and all other things that can be done in the way of fences. Bring up pea sticks when returning from the woods, and point and lay aside poles for the bean yard.

IMPLEMENTS.—Are the tools all in good order? the plows, harrows, rakes, carts, &c. Is the hay-wagon, or tumbrel, ready for the haying season, when the sound of the whetting scythe is cheerful music, while that of the saw and axe has lost all its charms, as being out of time and place, like hosing in the winter.

SYSTEM.—Arrange where your crops shall be, the corn, the oats, the potatoes, and see that seeds of all the kinds you intend to use are in sufficient quantity and in good condition. Make a plan of the garden, marking out your beds for flowers (for our readers cultivate flowers) and kitchen vegetables; for beans, peas, and the melon and cucumber hills. Decide how many and what kinds of fruit trees you will plant, and where you will place them. Add a quince bush here and there in the spots which they love and where they will thrive surprisingly.

SMALL FRUITS.—A few more raspberry, thimbleberry, currant and gooseberry bushes may be set, if you decide upon a place for them now. They are a profitable article for the market, and will ten times repay the cost in affording a cooling and palatable dessert when the appetite is dull during

the hot weather. They are more wholesome than meat at that season, have a bewitching charm for visitors and children, and cause the latter to remember the old homestead with feelings of peculiar delight in after years.

All these matters require thought and time; if you *plan* them now, you will only have to *execute* when milder skies and genial suns invite you into the fields, where a thousand things seem to demand your attention at once.

STOCK.—But the stock must not be forgotten. The oxen, horses, cows, pigs and poultry must all "receive their meat in due season." Gravid cows must be especially attended to. Give them liberty in a dry and warm place with plenty of litter, a week or two previous to the time of dropping the calf, and there will be little danger of accident. Roots are of special importance to cattle now, as a change from their dry fodder. We have supposed that among them all, parsnips and carrots were the best, but Sir Humphrey Davy, we notice, arranges their nutritious properties pound for pound as follows—1, potatoes; 2, sugar-beet; 3, mangel-wurtzel; 4, parsnip and carrot; 5, rutabaga; 6, and far behind all others, the round turnip. Any of them may be fed with advantage in moderate quantities, but our decided preference is for the carrot and parsnip.

Cattle that are fed well, daily carded and kept clean, are seldom annoyed by vermin; still, an examination should often be made about the roots of the horns, along the back and to the roots of the tail. If they have made a lodgment, a little melted lard applied to the parts mentioned, and thoroughly rubbed in, will destroy them. At any rate avoid all mercurial ointments.

FLAX.—The good old mode of preparing flax is not obsolete among many of our readers. Towards the close of the month, sheltered from cold winds in the sunny floor of the barn, looking out upon the south, fit up the brake, the swingling-board and hatchel, and make merry music to the piping

winds as they pass. Now that a mode is devised for pulling flax by machinery, and of preparing it to be wrought in cotton mills, it will become an important crop in New England. The old implements mentioned above will once more hold up their heads, and their cheerful clatter again animate the waning February afternoons.

POULTRY.—Keep two or three kinds of grain before them, cob-meal mixed with hot water, once a day, occasionally meat, scraps, or lard mixed with meal, plenty of pounded bones, oyster-shells, mortar, and a *warm sunny place*, and they will not only pay you for the outlay, but a handsome profit. During the severely cold weather of the three months just past we have had a most abundant supply of eggs for family use, and some sixty dozen for market, from 30 hens.

The above are but a few hints—the systematic farmer will have all things “squared away” for spring business, as the good seaman has his ship for action. Starting a little ahead of his work in the spring he will drive it before him all the busy season; finding time to attend to each crop at the moment when it most needs his attention. Thus he will have a ready hand, and cheerful heart, with plenty of opportunities for intellectual enjoyment and for adding his portion to the amenities of life. And all this is especially *his farm work for February*.

For the New England Farmer.

PUMPKINS—SQUASHES.

MR. EDITOR:—Having received from Dr. T. W. HARRIS, of Cambridge, a gentleman so well known for his indefatigable researches into the arcana of nature, a most interesting letter upon the different varieties of the squash and pumpkins cultivated in our region, and believing that this useful as well as laborious investigation would be as interesting to many of your readers as it was to myself, I have ventured to forward it for the *Farmer*. From this investigation, many as well as myself will be inclined to adopt the same conclusions he has arrived at, particularly in regard to the autumnal marrow and Valparaiso squashes, that from the readiness with which these two varieties mix and hybridize, there is a close and natural affinity.

Yours, truly,

Salem, Jan. 6, 1852.

JOHN M. IVES.

Cambridge, Mass., Nov. 29, 1851.

JOHN M. IVES, Esq.:—Dear Sir,—Mr. PROCTOR, of Danvers, has favored me with your letter concerning the marrow squash, first brought into notice by yourself in 1835, and now acknowledged to be the best variety in cultivation. In the course of a correspondence with Mr. Proctor, I mentioned my desire to obtain an authentic specimen of the old Valparaiso squash, introduced by Com. Porter, between 30 and 40 years ago. I wished to compare it with one grown in my garden this summer. Since then, however, I have been assured by several persons, professing to know the true Porter Valparaiso squash, that my squash was the same, as indeed I had supposed it was from the recollec-

tion I retained of the former as seen some 15 to 20 years ago. Accident led me to look into the history of plants of this kind during the last two years. A notion prevailed among botanists that they all came from the East, Asia and India being indicated in modern botanical works as their native region. A laborious investigation of ancient Greek and Latin authors, an investigation of the accounts given by Arabian physicians, and by Rabbinical writers, together with early voyages and travels in the East,—have satisfied me that what we call pumpkins and squashes were unknown to the ancients, and that they did not begin to be known in Europe until after the discovery of America; that the West Indies, Florida, Mexico, Brazil, Peru and Chili, all furnish various kinds, which were introduced into Europe by the first discoverers and settlers of the new world; that these were soon spread by commerce throughout Europe, and even to the East, by Spanish, Portuguese, and Dutch navigators. The pumpkin had already reached England, and was cultivated before the English got new varieties of fruits of this kind from Virginia and New England, the Dutch from New York, the Swedes from New Jersey and Delaware, and the French from Canada.

Wherever these fruits were carried, whether to England, continental Europe, Greece, the East Indies, even to Amboyna, the Philippine Islands, and China, they retained the names imposed on them in the languages of those who introduced them. Hence, in the East Indies, their names alone (not known in the vernacular of the country) show them to have been of foreign origin. According to their shape and color, pumpkins and squashes were likened to gourds (calabashes) melons, or cucumbers, and subsequently took the same names as these fruits bore in the European countries where they were cultivated. Thus the Spaniards had only one name both for calabash and pumpkin, namely, Calabasa. In the greater part of Europe, however, they took the same name as had been previously applied to the muskmelon—pepone in Greek, popone in Italian, pompon in French, pumpor in Swedish and pompoen in Dutch, whence came pompon and finally pumpkin in English. The latter knew nothing of our name *squash*, before the settlement of New England. The earliest English writer who used it as we do, was Robert Boyle, who died in 1691. Before his day, pumpkins and squashes were called by the former name only. The result of the historical investigation was—that these fruits were not of Asiatic, but exclusively of American origin.

My next step was to study the botanical characters of the various kinds of pumpkins and squashes. And for this purpose, during the past two summers, I have raised several varieties in my own little garden, and have also examined all others that I could find in my vicinity—viewing them carefully in the growing state, and dissecting the flowers and young fruit. I have now come to the conclusion that they are divisible into three natural groups. 1. The summer squashes, or gourd-squashes,—having at maturity a hard rind, and a dry, spongy, whitish pulp, with small, thin seeds. It is not necessary to say anything more of this division here. 2d division,—represented by the common field pumpkin, crook-necked squash, &c.,—has large rough leaves, more or less deeply lobed,—a 5-furrowed (sometimes 10-furrowed,)

long fruit-stem tapering at one end, and very much enlarged next the fruit,—a fleshy fruit, more or less deeply orange-colored within, a small circular flat scar at the blossom end, and large thin seeds. 3d division,—represented by the Valparaiso and marrow squashes; large rough leaves, almost entire, or lobed only by hybridization, a short, thick, somewhat oblique fruit-stem, which is nearly cylindrical while green and growing, is not deeply 5-furrowed, but is only longitudinally and irregularly wrinkled,—fleshy orange-colored pulp as in the 2d division,—a small tubercle at the blossom end, consisting of the indurated base of the pistil,—and large plump seeds.

I have left out of account other botanical characters, wishing to present those only that were the most obvious and that any person could easily understand. Nature thus seems to have stamped an individual character on each of these three groups. But when we come to sub-divide them, we do not find it so easy to discover and point out characters that are *constant*, and of sufficient importance, botanically considered, to distinguish the several kinds,—nature here seeming to sport in endless varieties, and to allow great variations by hybridization.

Having narrowed the limits within which your marrow squash is contained, by throwing out of consideration the first and second divisions,—and bringing it into the same division with the Valparaiso squash, the next question regarding it, is this—is it a species or a variety, and, if the latter, what is its origin? My friend, Dr. Wheatland, had the kindness to inquire of you concerning it in March, 1850, for me, and I have your reply as given to him, in his letter of that date, in which you state that it came from Northampton, and that you supposed it to be a “hybrid” there accidentally produced, a statement which coincided with my own conclusion regarding it. Molina, a native of Chili, and a naturalist, described a fruit, indigenous there, under the name of *Cucurbita mammeata*, so named on account of the nipple-like protuberance at the blossom end. I have no doubt that this is the true original stock of Commodore Porter’s Valparaiso squash. The latter was introduced into this country, say between 1815 and 1820, I do not know the precise date, and it soon came into general cultivation in New England. Now, unless we can, in like manner, trace the marrow squash to a foreign source, and show it to have been introduced from abroad,—we are brought to the inevitable conclusion that it is a variety or a hybrid from some other,—and from what other, save from the Valparaiso, previously known and cultivated here? I know of only two other distinctly characterized fruits belonging to the third division, both of which have been recently introduced. One of them is a long, white-striped Lima squash, the seeds of which were brought to this country last year direct from its native country; the other, the very singular and very valuable acorn squash, which differs most remarkably from all other known species. If you have any certain knowledge of the introduction of the marrow squash, I shall be pleased to hear of it. Otherwise, will you not adopt the same conclusion that I have arrived at?

Yours, respectfully, T. W. HARRIS.

He is unfit to rule others who cannot rule himself.

For the New England Farmer.

A REMEDY FOR WORMS IN SHEEP.

It is a well-known fact that sheep are sometimes troubled with worms in the head, to the great annoyance, if not damage, to whole flocks. And various kinds of treatment are resorted to, to stop the evil. Even spirits of turpentine and corrosive poisons, enough sometimes to kill the sheep, are thrown into the nasal passages, which serve only to make the worms recede farther into the cells around the brain.

The most effective remedy that I have ever known, is the following:—Take honey, diluted with a little warm water, a sufficient quantity, and inject it into the nose freely, with a 4 oz. syringe. The worm will leave his retreat in search of this new article of food; and when once in contact with the honey, becomes unable to return, and slides down the mucus membrane. Then, (say two or three hours after using the honey) give the sheep a little snuff or cayenne, and the effort of sneezing, will place the worm beyond the chance of doing harm. Some of our best farmers have tried this remedy long enough to establish its merit.

To prevent this evil, some farmers, in the month of July or August, bore holes in their salt troughs, with a two inch auger, and fill them with salt. And around the top of the holes, apply tar, frequently, so that when the sheep eats salt, a morsel of tar clings to the nose, which prevents the insect from depositing its eggs in that region.

Bristol, Jan. 12, 1852.

M. C. S.

REMARKS.—We like the above, because no pernicious remedies are prescribed; and without knowing anything about its efficacy from our own experience, should think it well worthy of trial.

COMPLIMENT TO JONATHAN.

Our Yankees, we think, will read with interest the following, from an able English paper:

Our cousins across the Atlantic cut many degrees closer to the ground than we do in seeking for markets. Their industrial system, unfettered by ancient usage, and by the pomp and magnificence which our social institutions countenance, is essentially democratic in its tendencies. They produce for the masses, and for a wholesale consumption. There is hardly any thing shown by them which is not easily within the reach of the most moderate fortune. No government favoritism raises any branch of manufactures to a pre-eminence which secures for it the patronage of the wealthy. Everything is entrusted to the ingenuity of individuals, who look for their reward to public demand alone. With an immense command of raw produce, they do not, like many other countries, skip over the wants of the many, and rush to supply the luxuries of the few. On the contrary, they have turned their attention eagerly and successfully to machinery as the first stage in their industrial progress. They seek to supply the short-comings of their labor market, and to combine utility with cheapness. The most ordinary commodities are not beneath their notice, and even nursery chairs are included in their collection of “notions.” They have beaten us in yacht-building, they pick our best locks, they show us how to reap corn by machinery, and to make

Brussels carpets by the power-loom. Our coopers will hear with dismay, and our brewers with satisfaction, that by an invention of theirs recently introduced into the Exhibition, one man can do the work of twenty in stave-making, and far more efficiently. Such triumphs do not much affect, perhaps, the mechanical superiority of the mother country, but they serve to show us that while on the one side nations less free and enlightened than ours teach us how to throw a lustre and grace over the peaceful arts, our own children are now and then able to point out how we can improve and extend them.—*Mark Lane Express*.

KNOWING HOW.

"That country which has the most intelligent laboring population, will excel in every branch of industry."

Gov. BOUTWELL.

Brother farmer, what is the reason you cannot go into your neighbor's work-shop and make a *wheel* as well as he? What is the reason you cannot repair your own clock or watch, as well as the watchmaker? Why can you not shoe your own horse, or your own *feet*? Why can you not preach on Sunday, and argue law-cases, and amputate limbs the rest of the week? Is it because you have less natural understanding than the men who do these things for you? By no means, it is simply because *you do not know how*.

This you acknowledge at once, and you flatter yourselves, or rather, you have a right to assume, that you might, with the same attention which men of other occupations give to their business, have been their equals in it.

But, you have a neighbor, perhaps, who year after year raises a crop of fifty bushels of corn to the acre; while your land, of the same quality, produces but thirty; and you have another neighbor, perhaps, who always has his cattle fat and sleek, while yours are poor, and his two year old steers as large as your three year olds! Why is this?

Now be honest in the matter. Don't say that somehow he has better *luck* than you, or that there is no particular reason, but it seems to *happen* so. Own up, like a man as you are, that it is because he *knows how*, and you do not. Confess it to *yourself*, if to nobody else, and then you will know as much as the Governor, or at least as much as he has *said*, in the above article from his message, that *intelligent labor will excel all other*, or as a friend of ours often tells us, "*there is a good deal in knowing how*."

If we have as much natural capacity as our neighbor, and as good land, and do our best, and yet cannot raise as good crops, or cattle, as he, it is because *we don't know how*. And when we have come to this conclusion, we shall soon be trying to learn, and *how* shall we learn? If you want your son to learn the profession of law or medicine, you know well enough how to have him taught. First you send him to school, and give

him a good *general* education, that his mind may be thoroughly disciplined by habits of attention and investigation, so that he may be capable of understanding whatever may be presented, and then you place him with those who best know the principles and practice of the particular profession in view.

If again you desire your son to be a mechanic, you expect him to *learn* the trade of one who understands it. You would think a man crazy who should advise you to let your son *find out* the business of a wheelwright or blacksmith without any teaching.

In everything but agriculture, we see and feel the advantages of education—of intelligent labor. In every thing else, we believe in Progress. In every other occupation, trade and profession, there are men, admitted by all to be wiser and more skilful than the rest, men to whom others of the same business are ready to concede the possession of superior knowledge. But in agriculture, the impression seems to be different. We feel reluctant to confess that others are better farmers than ourselves, that they succeed better than we because they understand their business better. The idea seems to be that Agriculture, like the Goddess of wisdom, was born full-grown! and that if we can only continue to do as our fathers did, it is enough. How strange this idea! that a business, involving the science of chemistry, of natural philosophy, geology, botany, in short a wider range of knowledge and research than any other, should be the only one, that every man should claim fully to understand.

But the question returns, how shall we learn? To the present generation, the answer is—learn from your neighbors—learn from the newspapers, and periodicals of the day, from Farmer's Clubs in the villages, and meet weekly for discussion—read books—in short, use every means to compare your opinions with those of other men.

For future generations, we hope better things. Let the present Legislature see to it, that *some* means are provided, for giving an *agricultural* education. Law schools, and Medical schools, and schools of Divinity we already have, constantly imparting to their respective students the means of "*intelligent labor*," in their future professions. But there is no *school in Massachusetts for the farmer*.

Not long ago, we received a letter from a gentleman of another State, requesting us to advise him where in our State, he could place his son, to educate him in the principles and practice of agriculture, and we were ashamed to be obliged to inform him, that for that most important of all occupations, our Commonwealth, so generous in the general cause of education, had made no provision.

Farmers of Massachusetts, attend to this mat-

ter. See to it that some provision is made, at once, to advance education in agriculture.

In this branch of industry alone are we *behind the age*. In this branch of education alone, does the old world excel us. In almost every state in Europe, are there in successful operation agricultural schools and colleges. In arts and manufactures, we are fast outrunning the world, and simply because we employ "intelligent labor," while the operatives of Europe are ignorant and degraded. In Agriculture, as in manufactures, the contest with other nations is soon to be determined by the intellectual and moral power rather than the manual force of the laborers."

For the New England Farmer.

THE CORN CROP.

BY SCRUTATOR.

MR. EDITOR:—I have read in your paper, the *New England Farmer*, of Dec. 6th, a comparative statement of the net profit of an acre of corn in some eastern and some western States, by which it is made to appear that an acre of corn in Massachusetts yields more profit than an acre in Illinois. I have no inclination to disturb any comparisons that may be made favorable to this State. Neither my feelings nor my interest, nor the desire to sustain any theory or prejudice, would draw me into a discussion upon this matter. But conceiving that the remarks of your correspondent, Mr. Brooks, backed by his figures, are likely to lead to wrong impressions, and that it is always a good office to correct errors, I take the liberty of presenting some facts which should not be overlooked in making correct estimates on this subject. A most important element in such a comparison, in order to arrive at a correct result, is wholly overlooked by your correspondent, which I will show presently. But first a word or two on two items of his calculation.

His statement is thus:

Corn, average crop in Mass., 40 bushels the acre.	
" " price the bushel, 80c, is	\$32.00
" " value of stover per acre,	7.00

	89.00
Cost of cultivation including interest,	20.00

Profits per acre,	\$19.00
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Corn, average crop in Illinois, 60 bushels the acre.	
" " price 26 cents, is	\$15.60
Value of stover,	1.00

Value of whole crop the acre,	16.60
Cost of cultivation, including interest on land,	7.20

Profits per acre,	\$9.40
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First, I am not prepared to say that the *value* of the stover (or estovers) in Illinois is or is not accurately stated. But in *quantity* it is from 70 to 100 per cent. more than that of an acre in Mass. If it is equal to half a ton of hay, in Mass., it is nearly double that in Illinois. If it is not worth more than a dollar, it is because hay can be obtained at a cost of \$1 or \$1.50 in labor. And this shows how easy and profitable is stock raising. Again, I think your correspondent has much overrated the cost of an acre of corn in Illinois. But I will now

show you that very important oversight, as I consider it in his estimate. And in doing this I shall take his figures, in the two items just alluded to, to be correct. He states the cost of cultivation in Massachusetts at \$20, in Illinois at \$7.20, or the cost of cultivating one acre in Massachusetts equal to nearly the cost of three in Illinois. Now, the cost of the crop, and not the area of cultivation, is the true basis of a correct estimate. If a farmer in Massachusetts for an expenditure of \$20 can obtain a profit of \$19, what can he obtain in Illinois? Taking his figures, the quantity would be so very near to three acres that I shall take that area.

Corn, average crop on 3 acres in Illinois, 180 bush.	
" " price 26 cents, is	\$46.80
Value of estovers,	8.00

Whole value of 3 acres,	49.80
Cost of cultivation,	21.60

\$28.20

Thus an expenditure of \$20 in Massachusetts gives \$19 profit; an expenditure of \$21.60 in Illinois gives \$28.20 profit. The expenditure, in each case, is of course about the measure of the labor. I think it is stated rather favorably for Massachusetts, and that the labor of cultivating one acre in Massachusetts is generally equal to that of cultivating four in Illinois. But I have chosen to take your correspondent's figures for the basis rather than my own. It will not be so liable to be controverted, and is sufficient for the purpose of showing the error of the calculation. I think very exact estimates would show a result more favorable to the west. A more correct view would be shown thus:

I can buy 10 acres of tillage land in Mass. at \$50 per acre, \$500.	
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I can buy 100 acres of tillage land in Illinois for \$5 per acre, \$500.	
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Cost of corn, 10 acres in Mass., at \$20 per acre,	200
Value of crop \$39 per acre,	390

Profit of 10 acres,	\$190
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Cost of corn, 100 acres, in Ill., at \$7.20,	\$720
Value of crop, \$16.60 per acre,	1660

Profit,	\$940
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Or, cost of corn on 80 acres in Illinois, at \$7.20, equal to \$10 in Massachusetts,	216.00
Value of crop, \$16.60	498.00

Profit of 80 acres, in Illinois,	282.00
Against \$190 for the same labor in Massachusetts.	

SCRUTATOR.

BREAKING STEERS.—Very few oxen are now used on farms, compared with the number employed years ago, when the country was new. The time was, when every farmer had one or more yokes of oxen or steers, and many a winter day used to be employed by the boys in breaking the latter—learning them to "haw" and "gee," &c., and too often the whip was constantly in use. But kindness and patience will accomplish more than the lash, and when an animal understands what is expected of it, it will soon learn to perform its duty. Oxen are more profitable for many kinds of work on the farm than horses, and we hope many a farmers' boy will break his yoke of steers the present winter.—*Rural New-Yorker*.

For the New England Farmer.

THE NURSERY BUSINESS.

BY GEORGE JAKUES.

The management of a nursery is a business by itself. The cultivation of trees and flowers for market, it is true, is a species of agriculture; but the education which a New England farmer's son commonly receives does not at all qualify him for this occupation. The deep tillage and generous manuring, the propagation, transplanting, budding, grafting and pruning of trees; the destruction of insects, the modes of treating what are called diseases, are labors to which there is little that is analogous in ordinary farming. Nor is this avocation by any means exempt from the hazards to which inexperience exposes itself, when engaging in an untried business. Nevertheless, we see, every year, individuals investing capital and bestowing labor in getting up new nurseries, sometimes upon unsuitable soils, sometimes remote from a market, and often in utter disregard of other unfavorable circumstances. In a few years failure ensues, and a beggarly account of trees, dead or diseased, or of worthless varieties, winds up the concern.

Having had some ten years' experience in the cultivation of trees, &c., for market, we venture to offer a few hints by way of advice to those who may be contemplating to engage in the nursery business, the coming spring.

In establishing a nursery, many important things are to be taken into consideration,—the climate, soil, site, location with reference to a market, &c.

The climate has much to effect the prosperity of a nursery establishment. Upon Long Island, or in New Jersey, other things equal, trees make as much growth in two summers as they do in the interior of New England in three. In one climate trees are peculiarly exposed to blight; in another, to being winter-killed; in a third, to be injured or destroyed by insects; in a fourth, to drought; in a fifth, perhaps to something else.

The soil is of vital importance. Some land is too dry; some too clayey; some too sandy; and almost all soils are too poor. In the general, a deeply tilled, highly enriched sandy loam is the best for fruit trees, and for most plants of an ornamental character.

The site.—A somewhat elevated, gentle slope, looking toward the south or south-west, is perhaps the best aspect. Cherries and peaches will grow best upon the highest and driest parts; upon the next lower ground, apples and pears; still lower down, apples may be continued, and plums, quinces and grapes added.

The location with reference to a market is to be taken into careful consideration. Land costing from \$500 to \$1000, in the suburbs of a flourishing town or city, is far preferable to a retired locality on much cheaper land; for a nurseryman must sell as well as cultivate trees and flowers.

The whole annual cost of conducting a New England nursery for a series of years, will not fall short of \$200 per acre. We give in round numbers some of the items of this expense, viz.: Rent or interest of land, \$30; labor, \$90; tools, stocks for grafting, seedlings, &c., \$35; manure, \$10; advertising, &c., and interest on these outgoes accruing, before the trees are sold, say \$35. Total, \$200.

So many of the circumstances vary, that it is not

practicable to make these estimates accurately.—The expenses would sometimes overgo and sometimes fall considerably short of the above sum; we give what we consider a fair average.

Nursery trees are not generally sold at an average age of less than five years; and about five thousand saleable trees is the utmost that an acre will produce. Hence but one thousand trees, (meaning of the usual size,) can be sold annually from a one-acre nursery;—in favorable years more, in others less. Thus it appears that by selling trees of five years old at an average price of twenty cents, a nurseryman will only defray his necessary expenses. At twenty-five cents per tree, we have fifty dollars profit per acre,—which we believe is much more than New England nurserymen have averaged during the past ten years!

We do not wish to discourage, or, as the phrase is, to cast a wet blanket over this business; but we ought to mention some of the sources of a nurseryman's losses. Many trees die from the congenial nature of the soil, or perish under the hands of unskilful or careless laborers. Inserted buds are often frozen; grafts are dried up; the trunks are gnawed by mice; the roots thrown out by the action of the frost; and the foliage often becomes a prey to lice and other destructive insects.

Thousands of trees are lost in some or all of these several ways; and many also from crookedness or deformity never become saleable. This is not quite all. A fruit is this year very popular, and nurserymen are tempted to graft it extensively. By-and-by these trees become large enough to be sold, when lo! the variety has proved to be worthless, and all the trees of it become at once unsaleable, and their value sinks to a level with that of ungrafted stocks of the same size; or even less than that; for many of them will hardly outgrow the shock sustained by another grafting.

Most of what has been said above will apply equally to the cultivation of ornamental trees and flowers.

Trees and plants of this class become unfashionable, and then worse than useless. Many flowering plants are so easily multiplied by dividing their roots, &c., that it is never safe to accumulate a large stock of them. Again, many of them must of necessity be sold during the season, on account of their being of a short-lived or perishable character. A nurseryman who can foresee the wants of the community two years in advance, will be quite likely to find his business profitable.

Another matter is worthy of consideration.—The nursery trade is not to be learned in a single week. Ten years' experience might grow rich in the business, when five years could hardly get a living, and a yearling novice would certainly starve.

Upon the whole, while we would advise an inexperienced person to be cautious about plunging rashly into the nursery business, we would by no means discourage enterprising young men from serving an apprenticeship to this trade with a view of setting up for themselves, at some future day, when they shall have properly qualified themselves for the business.

G. J.

Worcester, Jan. 24, 1852.

WHO SHALL TEACH US?—Agriculture is both a science and an art. All other arts and sciences are dependent upon it. From it, they spring, and

live and grow. Without it, they could not exist. And yet, among a people of twenty-five millions, and eminently an agricultural people, whose prosperity and future greatness depend upon their success in this pursuit, there is not an institution exclusively devoted to instruction in agricultural knowledge. Which State shall lead the way?

For the New England Farmer.

INTERESTS OF THE FARMER—STATISTICS.

BY J. A. B.

MESSRS. EDITORS:—I was an attentive and very gratified listener to the able and enlightened discussion by the Legislative Agricultural Society at the State House on Tuesday evening, 20th instant. The question then discussed, "What is the best mode to promote the interests of the Farmer?" is a question vital to the prosperity of the State. For Agriculture is, and ever must be, the great interest of this State and of all States.

Undoubtedly, as it was well stated by those gentlemen who took part in the discussion, knowledge is the great element of success in every art and in every pursuit of man. A knowledge of the materials to be wrought, a knowledge of the tools to be used and skill in using them, knowledge of the principles and elements involved in the work, and the best mode of operating, all these are necessary in husbandry as in every other art. This presents a vast field of science;—more extended, various and intricate than belongs to any other art or profession. It includes farriery, which is, in itself, thoroughly known, nothing less than the knowledge of anatomy, therapeutics and pharmacy needful in the cure of *human* diseases;—chemistry, and geology, and the application of each to husbandry; vegetable physiology, systematic botany, and the individual characteristics of plants. This large field of knowledge is not to be explored in schools or colleges alone; but is to be studied both at the desk and in the field; in youth and in manhood and age; by books and by manual operations, by counsel and by contemplation and by experiment.

But there is another branch of information highly useful in the pursuit of the farmer, which it is the purpose of this communication to indicate. It is a knowledge, accurate and intimate, of the agricultural resources of his district or country. This is to be obtained from a full body of statistical detail, to be collected under the authority of the State, or the patronage of the State Agricultural Societies.

This business of collecting statistics of Agriculture has been recommended by the President to the notice of Congress. But I am confident that a little reflection, if aided by some knowledge of the essential difference in the soil and products of the country, will satisfy every judicious farmer that this should be done by the State, not by the national government. The statistics to be collected should be of such matters as especially concern the farmers of a particular State, section, or district of country; and not merely of the general agricultural statistics. Such as the amount of the several farm products; the characteristic and peculiar adaptation of the soil to the product raised, and to the particular mode of husbandry

used; the systems of cultivation in use in certain situations or districts and on certain kinds of soils;—the prices of produce in the markets to which the farmers of the particular district resort;—and the amount of produce consumed in that market or disposable there. These statistics are such as can only be collected by the State governments, or by some lesser district arrangements. They are entirely impracticable to the national government. For instance, we have thirty or forty distinct geological formations or species of earth in Massachusetts, and each of these species has not one uniform quality of soil and productive capacity, but some three or four, adapted to different crops. The tastes and habits also of the people of particular States have some connection with the crops to be raised. In some of the New England States, rye is a principal crop, and is also a bread stuff in most general use. In other portions of the country it is unknown either as bread stuff or as a crop. But besides this the modes of culture are different; and the system of policy and taxation and general legislation calculated to effect the interest, of the farmer must proceed from the State government, not from the national. They are objects of State legislation, not national. The measures to be adopted, if any, to favor the agricultural interest, must proceed from the State not from the nation. If the national government had the constitutional power in the premises, it has not and cannot have the power practically to adopt such measures as shall afford benefit or encouragement to the farmers of a particular State. What might be done in that respect, though it might look to the benefit of the whole country, yet for the reasons above stated, for the peculiar conditions to be met in different sections of the country, what might be beneficial in one State, might be neutral or noxious in another.

I hope, gentlemen, the farmers will see this matter in its true light, and not ask for the interposition of the general government to do that for them which can only be done by their own State:—and that they will direct their influence in the right way, and discourage all application to the general government in this behalf; while they exert all their energies to procure the action of the State in obtaining full, reliable and accurate statistics of all these matters, and of the general agricultural capacities and resources of the State. The statistics in relation to farm stock, which are depending essentially on climate and pasture, can only be obtained in satisfactory details by the local governments. There are other subjects, also, beside those named, comprehended in the rural economy, that can only come under the notice of the State authorities, which will be readily suggested to every farmer. I have thought it sufficient to name a few for illustration of my ideas.

If I have not trespassed too much on your columns, permit me to make one other suggestion. Would not the interest of the farmers of the State be promoted by establishing a grain and produce exchange, at which all the cereal grains and large crops should be disposed of by an agent of the farm, kept separate from the provision business or retail trade, and also unmixed with other articles of general merchandize and commerce, upon a plan similar to the corn exchange of London and other markets in Europe? I throw out this merely as a hint, without intending to discuss it now.

I should prefer to have the question enter into the discussions at the State House.

J. A. B.

Jan. 22, 1852.

For the New England Farmer.

BLOODY MILK.

MR. BROWN:—Sir,—I beg to tender my grateful acknowledgments for the attention paid by you to my note of the 8th of Sept. last, in which I stated that my cow had, since the month of July last, been giving bloody milk, &c., &c.

I was induced to take that course in order to obtain information that I thought was much needed here, and perhaps in many other places where the *New England Farmer* is read—especially as I had made many unsuccessful experiments—and, as I found on inquiry for a cure, that some of my neighbors had lost the use of some valuable cows from the same cause.

I beg now to state for your information, and for the benefit of your readers, that shortly after I wrote you at that time, I, thinking that the disease proceeded from a cold taken by being left in my field during a heavy rain-storm, rubbed her bag a few times effectually with the "Cramp and Pain Killer" made by Curtis and Perkins, of Bangor, Me.; and I have every confidence in saying that that, and that alone, effected an entire cure in the course of three days—and I unhesitatingly recommend all persons under such circumstances, to make use of a similar application.

Therefore, if you should think this worthy of a place in your paper, you will please give it publicity. I am, gentlemen,

Your very obedient,

J. E. UPHAM.

Harvey, County of Albert, N. B., Jan. 5, 1852.

QUANTITY OF FLAX-SEED FOR AN ACRE.

The quantity of seed proper for an acre may vary according to the object. If the crop is destined for seed it is probable less than a bushel might give as large a yield as more, but if lint or fibre is the object, mere seed would be required. We notice in the report of a discussion at a late meeting of the Council of the Royal Ag. Society, Mr. MARSHALL, M. P., said—"With regard to thick and thin sowing, that question had reference to the object of the cultivator, namely, whether a fine fibre and little seed were required, or a coarser fibre with a full crop of seed." On the banks of the Lys, in Belgium, where the finest flax had been grown for centuries, and used for making the finest lace, they practised thick sowing, 3 1-2 bushels per acre, and obtained about 14 bushels of seed per acre; but the stems were long and straight, without branches, and the longest fibre was obtained. In Ireland and Russia thin sowing was practised, from 2 to 2 1-2 bushels per acre, and from 16 to 20 bushels of seed were obtained; but the stems of flax branched out more, and an inferior fibre was the result.—*Cultivator*.

INTERESTING TO FARMERS.—We examined yesterday a very ingenious invention at the seed store of Mr. S. N. Wickersham, on Smithfield Street, by which clover seed can be gathered at a very trifling expense. The following is its description:

"It takes the seed from the field, leaving the straw or grass all standing. It weighs two hundred and fifty pounds, is drawn by one horse, and gathers from ten to twelve acres per day. The fingers or teeth, catch all the heads, the revolving knives cut them off and throw them back into the box, thus diminishing the labor three-fourths, and saving all the seed. This machine comes so low that every farmer will have it, and pays the manufacturer 300 per cent., well worth speculators looking after—and is offered for sale, or exchange for real estate, merchandise, or horses, by the whole Union, by the State or by the County."—*Pittsburg Gaz.*

HYBERNATION OF INSECTS.

Towards the close of autumn the whole insect world, particularly the tribes of beetles, is in motion. A general migration takes place; the various species quit their usual haunts and betake themselves in search of secure hybernacula.* Different species, however, do not select precisely the same time for making this change of abode. Thus many lady bugs, field bugs and flies, are found out of their winter quarters even after the commencement of frost; while others make good their retreat long before any severe cold has been felt. The days which they select for retiring to their hybernacula are some of the warmest days of autumn, when they may be seen in great numbers, alighting on walls, rails, pathways, &c., and running into crevices and cracks, evidently in search of some object very different from those which ordinarily guide their movements.

The site chosen by different perfect insects for their hybernacular is very various. Some are content with insinuating themselves under any large stone, a collection of dead leaves or the moss of the sheltered side of an old wall or bank. Others prefer for a retreat the birchen or ivy-covered interstices of the bark of old trees—the decayed bark itself, especially that near the roots—or bury themselves deep in the rotten trunk; and a very great number penetrate into the earth to the depth of several inches. The aquatic tribes burrow into the mud of their pools. In every instance the selected dormitory is admirably adapted to the constitution, mode of life, and wants of the occupant.

* Winter quarters.

THE AUTOMATON TREE.—This ingenious piece of mechanism, the counterpart to that which was exhibited at the World's Fair, may be seen at Tuttle's Emporium, Broadway. It is a very perfect imitation of the hawthorn in blossom, the branches of which are peopled with humming birds, and others of the feathered tribe. When the machinery is put in operation, the tree presents a most animated appearance, the birds commence flying from branch to branch, without any perceptible agency, while their motions are so natural as easily to deceive the spectator with the belief that they are really alive. The mechanism is perfect, and the singing of the birds well imitated.—*N. Y. Evening Post*.

✍ A writer well remarks that men are often capable of greater things than they perform. They are sent into the world with bills of credit—and seldom draw to their full extent.

THE ORCHARD CATERPILLAR.

Messrs. Editors:—In No. 102 of the *Rural*, I notice an article with the above heading, in which the writer, "H. D. B.," states some facts in relation to the caterpillar in his section this season, and asks, "Do we get two crops of caterpillars in one season? or did our peculiar spring-like summer cause the miller to deposit her eggs perpetually, and if so, shall we probably be exempted from their ravages next summer?"

They usually produce "two crops" in a season, but I think not always. They do not, however, usually continue their depredations until the appearance of frost, but the lateness of the spring undoubtedly retarded their operations so much that a portion of them could not complete the routine of their existence in season to escape the frost king.

You may be reasonably exempted from the ravages next season, but do not flatter yourself that you will be entirely so. There will be *enough* left, and from this time to the first of April is the very best time to destroy them. No farmer or fruit-culturist should think of waiting till they appear in the spring to destroy them. If you examine your fruit trees you will occasionally find, towards the extremities of the branches, a little bunch resembling a warty excrescence, which upon examination

will be found to contain several hundred eggs. It is these which produce the myriads of caterpillars that devastate our orchards, and to destroy which so many expedients have been devised.

If every person who cultivates fruit trees would spend a few hours every winter in examining his trees, and would pick off and burn every one of these ovarious depositions which he could discover, we should soon hear no more complaint of the devastations of the caterpillar, and our eyes would no more be pained by the sight of their filthy nests, and of defoliated trees.

R. B. W.

Alabama, Dec. 11, 1851.

REMARKS.—We lay the above, from the *Rural New-Yorker*, before the reader, in order to call his attention to the matter, to ascertain whether anything can be done by winter operations towards lessening the number of insects which perplex us. It would undoubtedly be more comfortable unhousing the vermin in Alabama, where the article was written, than in New England, though there are days with us when we may scrape and scratch a little, if we could meet with success. Try all things, must be the motto, and practice that which is good.

STEVENS' SELF-SUPPORTING MOVABLE HINGE FENCE.

The above cut we have had engraved from a model sent us by Col. JOSIAH STEVENS, of Concord, N. H. It was designed by himself and exhibited at the State Fair, at Manchester, last fall.

It is constructed by nailing common palings upon horizontal bars of any convenient length.

The fence is made in sections, and the bars attached to each other by pins of wood or iron, and thus connecting the sections, as will be seen by reference to the engraving.

The outside paling at each end of a section should be three or four inches longer than the others, and sufficiently strong for the fence to stand upon, or each paling may come to the ground, as one may fancy. When the sections are attached they must be varied a little from a straight line, in a zig-sag direction, and the fence is thus self-supported without entering the ground at all.

By removing two pins a section may be swung open like a gate and permitting a passage to the field at any desirable point.

The whole fence may be moved without disconnecting it, by beginning at one end and moving a section or two at the time.

Or it may be taken apart in a few moments without drawing a nail, and placed under cover, if it is desired.

The sections may be used to confine an animal in the field, surround a favorite tree by the roadside or elsewhere, or to make any temporary enclosure.

It may be constructed in Maine or New Hampshire, we think, so as to become the cheapest fence in use with the exception, perhaps, of the wire fence.

"STEALING OTHER PEOPLE'S THUNDER."

The above is the title of an article in the *Ploughman* of the 10th January, under which appears a very singular *card* signed by Joseph Breck, to which are added some remarks by the editor. The drift of the whole article is to charge the Publishers and Editors of the Farmer with claiming to be the New England Farmer published for many years by Joseph Breck & Co., and never, from the days of *Balaam* until now, has any performance been better calculated to excite astonishment.

Mr. Breck uses the following elegant language, "I think it is outrageously gross and ungenerous to take the credit, honor and labor of others to build up *themselves*"! And our neighbor of the *Ploughman* endorses the sentiment as follows:

"The public as well as the publisher of the real New England Farmer have a right to complain of the confusion which is introduced by one person's assuming the name and using the reputation of another."

"A certain man" who "went down from Jerusalem to Jericho" probably was not more surprised at the treatment he received from those he "fell among," than are we, the Editors of the Farmer, and our Publishers, at this attack. Why, we had really imagined ourselves a very decent, honest set of men, who had in very fortunate times, found ourselves engaged in a common cause, with a very courteous brotherhood of editors, with a single eye to the prosperity of Agriculture.—But we evidently assumed too much, on some points, as the above quotations seem clearly to indicate.

Now, although we must take the liberty to offer to our neighbors the use of our *dictionary and grammar*, before they write any more about us, knowing their intention to use what *seems to them* gentlemanly and courteous as well as accurate language—we will endeavor to make answer to the charges brought against us, and ample confession of our sins.

And first we do claim that we publish *The New England Farmer*, the *only* paper of that name now published in the world. We do confess that the paper first published by that name was established, edited, printed and published before any of us were grown to man's estate, and that we cannot, by any strict apostolic succession therefrom, trace our right to edit, print or publish our paper. We do distinctly deny that we are in any way connected by purchase, descent or otherwise, with Joseph Breck & Co., as publishers of the New England Farmer. For Mr. Fessenden, the original editor of that paper, we have a profound respect and veneration, which is well expressed by one of our associates in an article in our weekly of the *same date* with the number of the *Ploughman* referred to, under the title "New England Farmer."

We have endeavored to infuse into our paper some of his spirit and enthusiasm, to catch some of his inspiration, to impart to the Farmer the same "character," to pursue the same "purposes" which always rendered his paper popular and useful. We understand that the parties who revived the New England Farmer, after it had ceased to exist, designed to supply the place it had so long and honorably occupied. The "time-honored name" was thought worthy to be preserved, and the pleasant associations which clustered around it in the minds of so many of our leading Agriculturists, doubtless gained us easier access to their homes and hearts. The number of the years of our life as a paper, is it not printed on every copy of our paper, so that he who can read may at once know the extent of our claims to antiquity?

Identifying ourselves thus, in name, "in character," "in purpose," in spirit, with the New England Farmer as Fessenden made it, may we not properly refer to its former course as part and parcel of our own. If rendering to Mr. Fessenden constantly the honor due to a great and good man, is taking "the credit, honor and labor of others to build up" ourselves, then we must plead guilty to the charge. To Mr. Breck we have not, to our recollection, had occasion to render any such honor, and have therefore no such sins to answer for.

As to our neighbor of the *Ploughman*, who regards our *youth* with so much contempt, we can only say that it is not *our* fault that we are so youthful. Since we started, we have grown old as fast as anybody else, and shall doubtless mature and become *antiques* in due season. As to the "confusion which is introduced by one person's assuming the name of another," it would seem that a brain capable of entertaining two distinct ideas at the same time, need not be much confused, should a person or paper assume the name of one departed. It certainly would not come within any definition of *original* sin, were we to name a boy for George Washington, or Benjamin Franklin, or Wm. Buckminster, or Joseph Breck, nor would the fortunate successor to either appellation be likely to borrow much glory, "credit or honor," from his "illustrious predecessor," through any "confusion" that might ensue.

But the cause of agriculture is gaining nothing by *this* article, and we cannot consent to spend our strength for that which is not *bread*, or any other product of the soil.

We flatter ourselves that we can *hoe our row* with our neighbors generally, in almost any field, but we altogether prefer fair weather and good company, if we may be allowed a choice. We trust we shall not be diverted from our main purpose, to *improve the soil*—nor from our fixed principle, to love our neighbor as ourselves, however we may be tempted.

EDITORS OF THE N. E. FARMER.

Gentlemen:—I have taken and read the paper under this name, from the commencement; when conducted by the sagacious and witty Fessenden—the industrious and discreet Putnam—the persevering and obliging Cole—and others, too numerous to be specified. I am quite surprised that any one should take exception to your notice of its character from the beginning. I read with much interest the remarks of Mr. Holbrook, on this point, and, as is the case with all he writes, in whatever columns it appears, I was instructed by it. It seems to me much better for each one to take care of himself, instead of attempting to jostle others off the track. Very truly yours,

J. W. PROCTOR.

Danvers, Jan. 10, 1852.

FIRST AGRICULTURAL MEETING,

AT THE STATE HOUSE, JAN. 14, 1852.

The first meeting of the Legislative Agricultural Association, for organization, took place at the Representatives' Hall, in the State House, on Tuesday evening, Jan. 14.

Mr. WHITAKER, of Needham, called the meeting to order and invited to the chair HENRY W. CUSHMAN, who briefly stated the objects of the meeting, and announced it as open for the transaction of business.

On motion or R. B. HUBBARD, that a committee of five be appointed to nominate an Executive Committee to arrange business for future meetings, the chair appointed R. B. HUBBARD, of Sunderland, JOHN W. PROCTOR, of Danvers, SIMON BROWN, of Concord, E. K. WHITAKER, of Needham, and ——— AUSTIN.

This committee subsequently reported for this committee the names of HENRY W. CUSHMAN, of Bernardston, AMASA WALKER, of North Brookfield, M. P. WILDER, of Dorchester, JOHNSON GARDNER, of Seekonk, ALLEN PUTNAM, of Roxbury, and JOHN W. PROCTOR, of Danvers, who were elected.

There being no stated subject before the meeting for discussion, Mr. HUBBARD improved the moment to express his own interest in these opportunities for exchanging opinions. He hoped formal speeches would be dispensed with as much as possible, and that those who attended might have the pleasure of hearing from practical men.

Mr. BROWN, editor of the *New England Farmer*, fully agreed with the last speaker, and believed that if the meetings are to be prosperous and successful, they will be so because of the interest the farmers themselves take in them. He was not opposed to discussions of, and speeches upon, scientific subjects occasionally, but the time of the meetings, to be interesting, must be mainly occupied by practical farmers.

S. N. STOCKWELL, the accomplished reporter of

the *Boston Journal*, offered the following resolution, which was unanimously adopted.

Resolved, That we recommend that the number of meetings the present session be limited to not exceeding twelve, and that this recommendation be referred to the Executive Committee, to be reported on at the next meeting.

Mr. WHITAKER, of Needham, was appointed Secretary until the Committee should make a report.

Mr. CUSHMAN, Chairman of the Executive Committee, reported as the subject for discussion at the next meeting,—

The best mode of advancing the interests of the farmer.

FRUIT CULTURE IN THE UNITED STATES.

An orchard of fruit trees in this country, even when well attended, does not require as much care and labor in five years as it does in one in the greater portion of Europe. A single peach tree in England or France receives more actual hard labor in one season, than an orchard of one hundred trees in western New York; and the price of a single fruit or at any rate half a dozen in the markets of London or Paris will buy a bushel in New York or Rochester. We complain of a curculio destroying our plums and apricots, and this is one of our greatest drawbacks here, but, notwithstanding, I have seen more plums and apricots on a single tree here since I returned than on any dozen I saw in England. We have the aphid on our cherry trees here, but they are easily destroyed. In both France and England I saw both orchards and nurseries of cherry trees almost ruined by them, and they were said to be unconquerable. We have fire blight and leaf blight here, and both are sad difficulties, but in France and England they are not without both these maladies. I saw apple trees very seriously affected in England, with what we designate fire blight; the ends of the branches black and dead, and there, as here, the real cause is quite unknown to the most skillful cultivators. In France, I saw as bad cases of our leaf blight on the pear as I have ever seen in America. The ravages of birds in Europe are tremendous. It is almost impossible to save a crop of cherries. Nets, scarecrows, and a thousand expensive and troublesome devices are practiced, that in this country, where labor is dear, would not be attempted, even though the culture should be abandoned.

In horticulture as in agriculture, the United States of America has a great destiny to fulfil. Our territory is not only immense, but so diversified in soil and climate that all the most valuable grains and fruits can be produced in such abundance as will enable us to supply other countries less favored in these respects. The intimate connection now established between all parts of the world has removed the barriers which distance heretofore created, and we have now a clear course. Cultivators may redouble their energies with a sure prospect of reward, and if our government, in its wisdom, should see fit to lend a helping hand, all the better.—*Letter of P. Barry, (of Rochester, N. Y.)—Western Hort. Review.*

GUANO.

Though but little has been published respecting this invaluable foreign manure for a considerable time, its use has been extended, and the demand has been increasing, in proportion to the experience which agriculturists have had of its beneficial effects. The failure of the supplies from the African coast, by exhaustion, has limited the market for some time past to the single accessible locality remaining, viz: the Island of Chinche, in the Pacific ocean, 15 miles west of the Port of Pisco, in Peru. Happily the guano of that region is by far the best in the world, and in sufficient quantity to supply any supposable demand for a course of years.

Experiments, as well as chemical analysis, proved, soon after the discovery of guano, that the Peruvian retains all its fertilizing ingredients from age to age, in consequence of the absence of rain in that climate, while that heretofore imported from Ichaboe, and other places on the coast of Africa, being annually drenched with rain, had its soluble portions washed out and lost.

The imports of Peruvian guano into England for the last 12 months, will not fall short of 120,000 tons, and the United States 40,000, with every prospect of a rapid and continued increase. Everything now promises that the increasing demand for this fertilizer will be supplied. The business is entirely in the hands of the Peruvian government, on whose account all shipments are made. From seventy to ninety vessels are constantly at Chinche, loading; and a large number of laborers, chiefly Chinamen, are at work upon the immense mass of material, the deposits of countless flocks of sea birds, which made the spot their abode for ages. The abundance of fish in the waters around the island of Chinche furnished them with food; and, although they have been driven from their old haunt by the sailors and workmen, the upper parts of the land are covered with their excrements, to the depth of eighty feet.

Agriculturists well know the saving made by using a small quantity of highly concentrated manure, even at a considerable price per hundred weight, instead of an immense heap of the common kinds, which, although of little cost nominally, must be carted and spread at considerable expense.

Among the comparative estimates made of guano with stable manure, it has been stated, that 300 lbs. of the former, is equal in effect to thirty cart loads of the latter; and though, in some cases, the cost may be a few dollars more of actual outlay in money, the expense of transporting and spreading the latter, at almost any price, will throw the balance much against it.

Guano is applied to land either in water, by which portions of it are dissolved, or mixed with various substances, as coal ashes, bone dust, or five parts

of loam to one of guano, or sprinkled pure in powder, either in drills before sowing, or as a top dressing in moist weather. On the different modes of applying, and the results on various crops, much has already been published from the best authorities; and scientific and practical experiments have united strongly in favor of this manure, for different soils and almost every kind of useful plant cultivated by man.

In Virginia the use of guano has raised the value of lands in several districts, long ago exhausted and almost abandoned, from \$1 an acre to \$10; and the use of it is fast extending in the South as well as in the New England States.

The Peruvian government has recently appointed THEODORE RILEY, Esq., of New York, their agent for the United States; and we understand that the consignments already received will be followed by regular and probably sufficient supplies for our farmers and gardeners who desire to avail themselves of its benefits.

The farmer's principal reliance, however, must be upon his well-managed heaps at home; those must be his permanent banks, from which shall issue constant and fertilizing streams to gladden all portions of his farm. Special manures are excellent as auxiliaries and convenient and profitable helps to those entering upon impoverished lands, before they can establish the manure heap by the common course of farm stock. Resorted to in this way as a secondary matter, large quantities of it may be used with advantage, by being properly applied, in small portions upon each farm.

For the New England Farmer.

SEEDLING POTATOES.

BY J. M. WEEKS.

MR. EDITOR:—I received from Mr. Bradstreet, of Danvers, last spring, half a bushel of his seedling potatoes, and as the product of this half bushel of seed seems with me to excel all other varieties that we have tried, for hardness, quantity, and good quality, both for stock and the table, should be more generally known. There seems to be four different varieties, one of which is a pale red and appears the most hardy, quite large on good land, very few small ones, ripe early in Sept. when planted early in May; they are found quite compact in the hill and have not rotted any this year. The three other varieties are white; one is rather small, but very early. The other two kinds are of good size, yield well, and are ripe by the middle of August.

In comparing the qualities of all these white varieties with the Carters, Mercers, Shannuks, Peach-blows, and other choice table potatoes, none are found so desirable for eating as Mr. Bradstreet's white varieties; but these are more liable to rot, as we found half a dozen diseased ones in digging twenty-two or twenty-three bushels. Even the red variety, we think, are fully equal to the Peach-blow for eating, and is not shy like the latter, seeking repose out of the hill, so as to compel those who dig to work the ground all over to find them.

The yield of Mr. B.'s Reds is at least twice as much as that of the Peachblow from an equal quantity and quality of land.

The product raised from the above quantity of seed was 40 bushels on loam land without manure, though the field was well manured and in corn in 1850. The land was plowed once only, about the first of May; furrowed crosswise three feet apart, not very deep, potatoes cut two eyes on each piece, three pieces in a hill, no eyes rejected; planted about two feet and a half apart in the furrow. Cultivated without hilling up, hoed twice, cultivator used, (not plowed,) a little plaster on each hill after first hoeing; weeds hoed up where they appeared third time. Land used for these potatoes was through the middle of the field and occupied a little less than one-eighth of an acre. Rohans on one side, Lepoards and Pink-eyes on the other; land all alike, cultivated as the other. Mr. B.'s seedlings yielded much more than any other, and rotted less.

The Rohan has been my favorite potato for field culture and stock since its earliest introduction into this country. It being less liable to rot and producing a greater yield than any other that we have raised. Moreover, since it has become acclimated, turns out to be excellent for the table from January to July when raised on light porous land not made rich by manure the same season they are grown. This variety of potatoes, in my view, should not be yielded up until some other, hitherto unknown to the writer, as a field and stock potato, is introduced, and will carry off the palm as competitor. Perhaps Mr. Bradstreet's Red Seedling may do this; and yet, as it is only five years from the seed, its character may not be perfectly established. Moreover, it is believed that all varieties of potatoes through the land as far as they have been cultivated have become impaired in constitution by cutting them to plant and perhaps other injurious practices. Every close observer must have noticed that where a whole potato is planted that contains many eyes, say from a dozen to twenty, not more than about half a dozen of the eyes vegetate and produce stalks, when at the same time, if a potato is cut in as many pieces as it has eyes, with an eye on each piece, the whole will grow when planted separately.

Now from these two facts alone, it appears obvious that the constitution of the potato has at least become *weakened* and the practice of cutting continued so long, that the disease has become hereditary, and the potato cut least is more liable to take disease and rot. The reservoir contained in the whole potato during the growth of the young tuber, formerly, where repeated cuttings for a series of years for planting had not impaired its constitution, was amply sufficient to combat and overcome deleterious atmospheric influences, or other unknown causes of rot. Much more might be said on this stale topic but I will only add one or two thoughts for a remedy—To wit: Let the original plant be procured fresh from the mountains in South America and carefully cultivated on land not contaminated by the disease, or plant on land that has been renovated by electricity or otherwise, and like the bankrupt, yield up and begin anew. Perhaps more anon. Respectfully,

J. M. W.

West Farms, near Middlebury, Vt., Dec., 1851.

OLD FATHER CARE.

Who's he! who's he, comes frowning now,
All wrinkled, grey and old—
The cypress wreath around his brow,
His aspect blank and cold?
Ha, ha! Ha, ha! I know him well;
His dull eye's vacant glare,
And icy touch, too plainly tell—
It is Old Father Care!

He comes like ancient Winter,
Crowned with icicles and sleet,
To crush life's flowers, and wrap me round
In his cold winding-sheet.
But I will cheat Old Father Care,
And turn aside his frowning—
For who would yield to grim despair
When he may laugh and sing?

King Time is rapid in his flight,
And death is ever near;
But if we do the thing that's right,
What cause have we to fear?
Then let's be happy while we may,
And banish dull despair—
For only timid fools give way
To this Old Father Care.

G. L. BANKS.

BLANKETS FOR SHEEP.

The following article may contain valuable hints for some of our wool-growing friends in Maine, New Hampshire and Vermont:

A writer in a late number of the London Agricultural Gazette says, "we find, on examining our mortality tables for the last twelve months, that out of 600 Cheviot and black-faced Ewehogs, the number of deaths has been but 16. Be it remembered also, that with the exception of about a score, none of these ever tasted a turnip, but fared with the ewes on the hill. Since we commenced the use of jackets (small blankets) we have especially noticed an extraordinary diminution of the cases of "sturdy," or water in the head. Hydatids in the brain are generally understood to be induced by long continued heavy rains, cold winds and general privation. Any one conversant with sheep must have observed the wool along the back parts in such a way as fully to expose the skin. The connection between the spine and the brain is obvious, and it cannot be wondered that hydatids (little sacks filled with water) should be formed in the brains of sheep much exposed to severe storms without due shelter. Hence the advantage of covering their backs with some material which will protect them in a great measure from the chilling effects of wind and rain. The material used is woollen, the size being 23 inches by 15. We lately purchased some coarse blankets that made excellent covers, each jacket costing four pence. The rams were put with the ewes on the 22d of November; and we allow 45 to each male.

The above remarks from a flock-master of large experience in reference to the cause of hydatids, or what we should call water in the brains of sheep, are interesting in a medical and physiological point of view. We know one breeder in Vermont who covers the back of each sheep with a half yard of common sheeting, painted to shed rain. The practice is founded in reason, and is likely to extend—literally making cotton tributary to the production of wool. The growers of the former staple will not object if every sheep in the United States and

Europe has a cotton "jacket;" for one that will answer every intention can be made cheaper of cotton than of wool. The comfort of domestic animals at the South is sadly and most expensively neglected. —*Southern Cultivator.*

EXTENSIVE FARMING.

We have before us, says the *Exeter News-Letter*, the *San Francisco Morning Post* for Nov. 15th, in which we find a very interesting account of an Agricultural Fair held in San Francisco on the 13th of Nov., and which throws completely into the shade all our farming operations on this side of the Rocky Mountains. A committee, consisting of Hon. J. C. Fremont, Hon. T. Butler King, Hon. J. R. Snyder, B. C. Saunders, Esq., and Hon. G. W. Wright, awarded a silver goblet to John M. Horner, of Santa Clara Valley, for the best variety of vegetables and grains. Mr. H., during the last season, raised from 800 acres of land with the assistance of 60 laborers, the following:

Potatoes,	120,000 bush.
Onions,	6,000 "
Table beets,	4,000 "
Turnips,	1,000 "
Tomatoes,	1,200 "
Barley,	5,000 "
Pumpkins,	30 tons.
Solid headed cabbages,	108,000
Chickens,	600
Eggs,	1,200 doz.
Onion seed,	800 lbs.
Beet,	200 "
Cabbage,	100 "

And thus, at a cost of about \$50,000, producing a crop worth at present prices some \$200,000.

An address was delivered at the Fair by A. Williams, Esq., in the course of which he read a statement from twelve citizens of the county of Santa Cruz, men of unquestionable integrity, from which the following is an extract:

"On land owned and cultivated by Mr. James Williams, an onion grew to the enormous weight of twenty-one pounds; on this same land a turnip was grown which equalled exactly in size the head of a flour barrel. On land owned and cultivated by Thomas Fallen, a cabbage grew, which measured while growing 13 feet 6 inches around its body, the weight is not known; the various cereal grains also grow to a height of from 6 to 12 feet; one redwood tree in the valley, known as Fremont's tree, measures fifty feet in circumference, and is nearly 300 feet high." Added to these astonishing productions are a beet grown by Mr. Isaac Brannan, at San Jose, weighing 63 pounds; carrots three feet in length, weighing forty pounds. At Stockton a turnip weighing 100 lbs. In the latter city, at a dinner party for twelve persons, of a single potato larger than the size of an ordinary hat, all partook, leaving at least the half untouched.

In the hall itself were exhibited nearly 1,000 varieties of pressed flowers, nearly 200 of which were illustrated by beautiful drawings; seeds of more than 300 varieties of native flowers; 20 varieties of lily and other bulbous roots; about 30 varieties of the principal grapes and clovers, many of the specimens pressed, embracing the burr clover, that feeds to fatness "the cattle of a thousand hills," when all other sustenance is parched and

withered; Shelton's mammoth clover, whose stalks from one root covered an area of 81 square feet, some of the stalks 6 feet long, a half inch in diameter, and the clover head five inches in circumference; single stalks of the white lily, producing 100 flowers, of indescribable delicacy and beauty; stalks of the oat gathered by Mr. Shelton, 13 feet high; specimens of wheat and barley having 150 and 200 mammoth stalks springing from one root, the produce of a single seed; the red sugar beet, 28 inches in circumference and weighing 47 lbs.; a cabbage, weighing 56 lbs., and measuring 7 feet in circumference; cucumbers, raised by the same, 18 inches in length; onions, 5, 6 and 7 inches in diameter, and weighing 3 and 4 lbs. each; potatoes 120 lbs. from 5 vines of a single hill—one from Mr. B. J. Stevens, of Santa Clara, 13 inches in length, 27 in circumference, and weighing 71-4 lbs.; the Russian bald barley, weighing 66 lbs. to the bushel, with a kernel double the size of large wheat; raspberries 5 inches in circumference; barley from the San Jose Valley, of which 965 bushels were produced from less than 5 acres of land; luscious grapes, single bunches weighing 10 lbs.; tomatoes weighing 2 lbs. each; pumpkins and squashes 100 to 140 lbs.; cabbages 2 feet in diameter and weighing over 50 lbs.

AGRICULTURE—ITS ORIGIN AND DIG-NITY.

When the earth was untracked by any intelligent being, when its fertile fields and lofty forests remained untouched by the hand of cultivation or any pruning instrument, the Creator was moved to design the formation of man; and the purpose of his creation was more than intimated. When the songster cheered the grove and the lion roared on the banks of the flowing stream, when the prairie shot up its cedar-like grass and the serpent remained unawed by any eye of human-kind, God saw that the earth needed yet one more inhabitant, for "there was not a man to till the ground." The earth's cultivation was the first expressed reason for the creation of man. Then moved the infinite Designer. He said, in council with the archangel, and with cherubim and seraphim, "Let us make man in our image, after our likeness; and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth." So man was created, and stood erect in majesty, and cast his eye over the spreading fields and flowing streams, and saw the creeping insect, the finny tribes, the feathered inhabitants of forest and field, and the cattle upon a thousand hills, all made subject to his dominion.

And while he gazed with admiring wonder, he heard the voice of blessing, and the voice of command; for "God blessed them and said unto them, Be fruitful, and multiply, and replenish the earth, and subdue it." He saw the gentle lamb approach him as if to declare her special need of his assistance, and lowing cattle followed the example set,

and made themselves the first dependents of their earthly lord.

God gave to man a wife—a helper in his toil. More delicate and beautiful than man, more gentle and more dependent, she won his strong love; and God loved the man so noble and majestic, and the woman so gentle and amiable.

The command to *subdue the earth* rested upon them, and they were virtuous and strong. Sin had not entered, but the soil needed tilling. They had heard the command to cultivate the ground, and stood in readiness to obey. The Creator was pleased, and the angels rejoiced at the sight of such a being as man, as the whole wide earth became his charge and gift. He appeared as first practitioner in the art of husbandry, and president of the great agricultural society of earth and time. Such was our first father before he sinned, and such was the origin of agriculture, before sin entered into the world.

While man was yet in his innocence, God was pleased to provide for him a special source of enjoyment. It was by the institution of Horticulture and Aborigiculture. "The Lord God planted a garden eastward in Eden; and there he put the man whom he had formed. And out of the ground made the Lord God to grow every tree that is pleasant to the sight and good for food." "And the Lord God took the man and put him in the garden of Eden, to dress it and to keep it." Such was the origin of Horticulture.

Upon the farmer and the gardener has the blessing of God rested, even health and peace, since the morning stars sang together for joy. He who follows their way is the first in obedience to the command of God, the first in enjoyment of heavenly blessings, first in usefulness to his species, and first in the proper dignity of his calling.

Upon the savage who breaks not the soil with a cultivating hand, the curse of heaven rests; and as the declining day loses its last lingering life when the sun goes down in darkness, so sinks away the tribe of that chief who teaches not his hands to till the ground, nor his young men to break the matted turf. The sons of the wild hunter of the forest will not be, and from his wigwam will arise no curling smoke; but the joyous and hardy sons of the farmer shall appear as the sands of the sea innumerable; and the hymn of Praise to God, and the shout of freedom for man, mingling earth's gladness with heaven's joyfulness, shall swell higher and higher from the cultivated fields and the vine-clad bower, when the savage and the slave, and the fop and the fool are seen as exceptions to the producing designs of creative wisdom and goodness.

GRANITE FARMER.—This paper comes to us this week with its face all washed and a new jacket on with appropriate ornaments. It is published at

Manchester, N. H., edited by Dr. T. R. CROSSY, and filled with excellent reading for the persons for whom it is intended. The people who can make such a show as they presented at their late State Fair, in N. H., are able to sustain a paper relating to their own affairs both with purse and pen. In his address the editor says:—"There is no earthly reason why the young farmer should not be as intelligent, as well educated, as well suited to adorn society and become its ornament, as the young man of any profession, and that too without at all depreciating his manhood or his ability to labor." We say so too.

THE CHEMISTRY OF NATURE.

If we trace back the history of our world into those remote eras of which the early rocks are records, we shall discover that the same chemical laws were operating then which control the changes of matter now. At one period the earth was a huge mass of fiery fluid, which radiating or throwing off heat into spaces, gradually cooled, and became surrounded with a solid crust; entombing within a seething of chaos of intensely heated materials, which now assert their existence in the shock of the earthquake, and the awful outbreaks of volcanic fires. In latter ages, when the crust had cooled still more, and the atmosphere let fall its showers, the still heated surface, hissing and roaring with the contact of the flood, was rent into enormous blocks, and dreadful abysses—which still remain all over the world, and form the wondrous monuments of an age of great convulsions.

Later still, the seas gathered together, the rocky masses were powdered into dust by the delicate fingers of the dew and the showers, the green herbs sprang up, and the monsters of the slimy deep appeared in obedience to the Creator's fiat, and the whole earth became a home of beauty in obedience to chemical law. The ceaseless play of the elements, and the mutations of the atoms, had built up the whole into one gorgeous scene of luxuriance; and man was awakened into being to render the whole subservient to his wishes; and, by tracing out the harmonies of the natural world, to arrive at a more exalted knowledge of his Maker.

The atom of charcoal which floated in the corrupt atmosphere of the old volcanic ages was absorbed in the leaf of a fern, when the valleys became green and luxuriant; and there in its proper place it received the sunlight and the dew, aiding to fling back to heaven a reflection of heaven's gold, and at the same time to build the tough fibre of the plant. That same atom was confined to the tomb when the waters submerged the jungled valleys. It had lain three thousands of years, and a month since was brought to light again, imbedded in a block of coal. It shall be consumed to warm our dwellings, cook our food, and make more ruddy and cheerful the hearth whereon our children play; it shall combine with a portion of the invisible atmosphere, ascend upwards as a curling wreath to revel in a mazy dance up high in the blue ether—shall reach earth again, and be entrapped in the embrace of a flower—shall live in a velvet beauty on the cheek of an apricot—shall pass into the human body, giving enjoyment to the palate, and

health to the blood—shall circulate in the delicate tissues of the brain, and aid, by entering into some new combination, in educing the thoughts which are now being uttered by the pen. It is but an atom of charcoal—it may dwell one moment in a stagnant ditch, and the next be flashing on the lip of beauty—it may now be a component of a limestone rock, and the next moment an ingredient in a field of potatoes—it may slumber for a thousand years without undergoing a single change, and the next hour pass through a thousand; and, after all, it is only an atom of charcoal, and occupies only its own place, wherever it may be.—*Farm. Jour.*

For the New England Farmer.

A SECOND EXPERIMENT IN POULTRY.

MR. BROWN:—I sent to the *Farmer*, last January, an account of the profits of my poultry-yard for 1850; and as experiments need to be followed up in order to conduct us to safe conclusions, I send you the results of 1851, with some deductions from the facts. The year began with 60 fowls, mostly crosses, natives and Polands, and some half-dozen Shanghaes, the value of which I was more particularly desirous of testing. The most of the old stock were killed off by June, which accounts for the falling off in the laying. They laid in

	eggs.		eggs.
January,	420	July,	204
February,	276	August,	216
March,	482	September,	60
April,	492	October,	48
May,	480	November,	144
June,	252	December,	192

Making in all 3216 eggs, or 268 dozen. On the 31st of December the account stands thus:

	Dn.
To 60 fowls, valued at	\$50.00
Interest on the same, - - - -	8.00
Eggs bought and freight on fowls, -	1.50
16 bushels corn and oob meal, - -	18.84
18 bushels corn, - - - -	18.85
10 bushels barley, - - - -	8.50
26 bushels screenings from grain store, -	10.22
2 bushels oats, - - - -	1.00
1448 lbs. ship-bread, - - - -	18.85
	\$120.06
	Cn.
61 fowls sold and used, - - - -	\$26.55
268 dozen eggs, - - - -	48.76
5 loads of manure, - - - -	5.00
86 fowls on hand, mostly Dorkings and Shanghaes, - - - -	118.00
	\$188.31
Deduct old stock and expenses, - -	120.06
Profits, - - - -	\$68.25

1. Assuming the mean of the number of fowls at the beginning and close of each year as the average number kept for the year, the expense of each fowl in 1850 was about 92 cents, and in 1851, 89 cents. As much the larger portion of my fowls this year are Shanghae, it is quite evident that it costs but little more to keep this kind of fowls than the natives. My experiment would prove the Shanghaes the easier fowl to keep. But it will be noticed that I have used screenings and ship-bread as articles of food for them, which I did not use at all last year. But making all allowance for this, there cannot be

much difference in the expense of keeping the native fowl that will weigh 8 or 10 lbs. to the pair, and the Shanghaes that will weigh 18 or 20 to the pair. This may seem an erroneous conclusion to those who judge of the gormandizing propensities of the Shanghae from the size of his body rather than from actual experiment. They are not extravagant feeders, but will give you a much larger quantity of flesh and eggs upon a given amount of food than any native stock I have ever tried. At any rate if this stock can be kept for anything less than a dollar a head a year, they will prove a very valuable accession to our poultry yards.

2. I think the experiment shows the economy of using screenings from grain stores and ship-bread as feed for fowls. I have somewhere read accounts of experiments upon grain, and the annual average of each fowl in several instances reached about \$1.10. In all seaports and places near the large cities where these articles are to be had, they will prove cheaper food than corn at the common prices in New England. The screenings contain a great variety of grain, which is an essential to success in raising poultry. They will not thrive in the best manner upon one kind of food. The screenings cost from 25 to 37½ cents a bushel, according to quality. The ship-bread is cooked food, and there is probably some advantage in this. It costs generally in the New York market \$1.12½ per hundred pounds.

3. The experiment shows that it is entirely practicable to have eggs in winter without artificial heat. The fowls had a barn cellar for their roost, and the range of a sunny yard, well sheltered from the north winds during the day. It will be observed that the laying during the coldest months compares very favorably with April and May, the months in which fowls usually lay the most eggs. Eggs in winter command a much higher price than in the spring, and make a great difference in the profits.

4. It pays well to take agricultural papers.—The profits of the yard last year were \$43.40; this year \$68.25; showing an increase of \$24.85. This increase is owing principally to skill in the management of fowls derived from the reading of agricultural papers and books. Without these I should have had no faith in the economy of keeping fowls, and should not have increased their number. Without these I should have lacked the requisite knowledge to make them pay their own way and pay me for the care of them. The papers cost but a trifle in comparison with the "material aid" they bring to every tiller of the soil or grower of stock. The mightiest sinews of war, in man's battle with the clouds, is agricultural science. Give him this, and he will pursue man's primitive vocation of subduing the earth with the highest pleasure and profit. The farmer's stock in papers is altogether the most profitable he can keep, for it will not only pay its own way, but make everything else worth keeping, follow the example.

W. C.

Stonington, Ct., Dec. 31st, 1851.

ANTIPATHY OF PLANTS.—The vine is wont to catch hold of anything nearest, except the cabbage, from which it will turn away, as if in strong aversion, and trail on the ground, rather than seek support from such a neighbor.

PRACTICAL ADVANTAGE OF SCIENCE.

The skill of Linnaeus, derived from his intimate knowledge of science, devised a method of destroying an insect, or of preventing its ravages, which had cost the Swedish government many thousand pounds annually by its destruction of ship timber in a single dock-yard. The insect was the *Cantharis Navalis*. By merely a knowledge of the season when the fly laid its eggs and attending to that fact, the timber was immersed in water at the proper time, and thus the ravages of the insect prevented.

By his botanical knowledge he also ascertained the cause of a dreadful disease among the horned cattle of his country, which had baffled all conjecture, and was considered wholly unaccountable and irremediable.

Under the management of Mr. Forsyth, and by his knowledge of vegetable physiology, timber trees in Kensington Gardens which had become hollow, were filled with new wood, and made to produce new and thrifty branches;—and pear trees a century old, which had become so decayed and knotty as to leave no fruit worth gathering, were restored to such health and strength as to cover the garden walls with new branches, bearing a profusion of fine fruit.

These three facts strongly illustrate the importance of an intimate knowledge of the things about us which we are constantly handling, raising and using in all our operations upon the farm. This is certain knowledge, *science*; it saved the ship timber, healed the diseased cattle and rejuvenated the trees. The farmer of all men ever has something scientific to learn; he should study, reflect and examine, until he can walk in his fields and hold intelligent converse with his soils, trees and plants in relation to their wonderful structure, springing and growth.

For the New England Farmer.

CORN VS. POTATOES.

BY SAMUEL TENNEY.

MR. EDITOR:—Being pleased and I trust profited by the perusal of the Farmer, I again take my pen to add my mite with the rest of the brotherhood.

Corn and potatoes are two very important crops with the farmer, but the way many manage in raising them, has a tendency to "run out" tillage land very much. I refer to the practice of planting two years in succession, first to potatoes and then to corn.

This is apt to be the method pursued, where a farmer has but little manure, he not wishing to seed down without dressing. Now as far as my experience and observation go, I am satisfied that this is not a judicious method. Potatoes are a great exhauster to the soil, especially of the phosphate of lime, and its effect upon the soil is to rob it of all of this valuable ingredient that the decaying sward may contain, which the succeeding corn crop will require that it may thrive and grow.

Some in this vicinity have got their eyes open and now plant their corn upon greensward and apply a quantity of lime, ashes or gypsum, and the consequence is they are rewarded with a fair crop, while others that pursue the old method do not more than get pay for their labor. In a cold season, there is another advantage, that is in the heat generated by the decomposing sward if suffered to lie undisturbed and the manure worked in with the harrow or ox cultivator, (which by the way is an excellent farming implement.) Another is, it is considerably less work to hoe an acre prepared in this way, than an acre after a crop of potatoes has been taken from it; besides, it leaves it in a better condition for grain.

I may be in an error, but I think that one cause, and not the least either, of the failure of the wheat crop, has been the successive cropping with potatoes and corn, and using but little lime, gypsum or ashes, thus taking a valuable ingredient from the soil without returning any of the same. Were gypsum and lime more freely used as a manure, in my opinion we should have better crops. One acre well manured and well cultivated is better than two worked at the halves, for it will produce as much in a long run, and will not require near the labor to tend it, and leave more time for improvement on the rest of the farm. Many in this way might raise as much as they do at present, and get time to rid their fields of bunches of bushes and large stones, thereby much improving the appearance of their farms and at the same time making them more productive and pleasant to work. The soil in this vicinity is a rocky highland.

Yours for the cause of Agriculture,

Raymond, Me., Dec. 1, 1851.

S. T.

REMARKS.—About one-half the amount of ash produced by burning the potato plant, consists of potash and soda, and in manuring, these ingredients should be returned to the soil. The potato crop also abstracts largely from the soil of both phosphoric and sulphuric acids. Unfermented manure, plaster of paris, ashes and salt would therefore make a dressing which would supply to the soil the ingredients which the crop had exhausted.

BREAD.

A northeastern writer says, that "the researches of chemistry have confirmed the experience of the world. It is past doubt that no single article combines so many valuable properties of nutriment as wheat." An incredulous old woman once having St. Paul quoted to reverse her doctrine, very coolly remarked, "Ah! there is where St. Paul and I differ." So I must differ with the northeastern Grahamite, though he be a *Philadelphia lawyer*. Surely he has not read the same chemistry as I have. My chemistry teaches me that a pound of Indian corn contains ten per cent. more nutriment than a pound of wheat, and when the bran is taken off, contains about ten per cent. less indigestible, resinous matter than a pound of wheat; and my experience teaches me, that the man who lives on corn-bread, can perform about ten per cent. more labor than the man who lives on wheat-bread; and, with equal care in baking, most families will soon learn to like the corn-bread best. But it is a common practice to give the wheat flour so many ad-

vantages in preparing it, that even saw-dust might be made palatable, while the corn-meal is so summarily treated, that men soon tire of it, and conclude that it is the fault of the bread, while it is the fault of the cooking. Let any family try the experiment of treating the corn-meal with all the seasoning usually applied to flour, and treat the flour in the summary manner usually employed with the corn-meal, and the discovery will soon be made, that corn-meal is more healthy than Graham-bread—more palatable than superfine flour.—*Dollar Newspaper.*

SELECTION OF APPLES.

On another page we copy from the *Albany Cultivator* that portion of an article, written by Mr. GEORGE JAKES, of Worcester, which relates to a selection of apples for market and home uses. This distinction is made because some excellent apples will not bear transportation to market, and these are termed apples for home consumption. Mr. JAKES speaks rather disparagingly of sweet apples; says "there is only a limited demand for them, most people considering such apples as valuable merely for culinary purposes." It seems to us that he must be in error in regard to the demand for sweet apples. We have never yet known the market supplied with good winter sweet apples. The early ones are caught up with great avidity in the towns about the city by the country marketers, who find large profits on them. From inquiries made in various parts of the State and extending through several years, it is our belief that not more than one family in twenty-five throughout the State is at present supplied with a barrel of good winter sweet apples, suitable for baking for the table. And this deficiency, if it exists, is not because they are not wanted, for it forms one of the most desirable dishes we believe in all families, is wholesome, nutritious and easily prepared, but because they cannot be found,—the market is not supplied with them.

Whoever will introduce a new richly-flavored sweet winter apple of good size, or supply the market with any good varieties now grown, will find a fair profit, and supply the pangs of unnumbered excellent housewives with the means of preparing a most delicious dessert.

BERKSHIRE CO. AGRICULTURAL SOCIETY.—At the annual meeting of this Society, which took place on the 6th inst., JUSTUS TOWER was elected President, W. C. PLUNKETT, and LYMAN FOOT, Vice Presidents, E. H. KELLOGG, Secretary, and STEPHEN REED, Treasurer.

The Society voted to instruct the delegates of the Society to the Central Board of Agriculture, to urge upon the Board the importance of petitioning the Legislature to establish an Agricultural school.

☞ The total loss of reason is less deplorable than the total deprivation of it.—*Cowley.*

For the New England Farmer.

THE HISTORY OF THE APPLE TREE.

BY S. P. FOWLER.

The apple tree is found indigenous in the Western and Middle States, but does not occur in Massachusetts. It is of a dwarfish habit, rising to the height of 15 or 18 feet, with a diameter of 5 or 6 inches. Michaux says the fruit is small, green and very sour, sometimes used to make cider, and by the addition of sugar is a fine sweetmeat. We have never been able to improve the flavor of the fruit by cultivation, and it is to be regarded more for the beauty and perfume of its flowers, than for any utility it possesses. It is known by botanists as the American Crab Apple. The common apple tree, which we cultivate, is found in the temperate parts of Europe and Asia, and was introduced into the colony of Massachusetts at an early period of its history, by Mr. William Blackstone, the first person, who erected a house on the peninsula of Boston, where he laid out and cultivated with success, a garden and orchard of six acres. He came over to the colony with Governor Endicott in 1628, and left Boston, as is supposed, in 1638, when he removed to Rhode Island, where he again cultivated an orchard, that produced an apple called the Yellow Sweetings; these are said to be the first apples grown in that State. I think that we shall find that the apple tree was introduced into the colony of Massachusetts, not only by Mr. Blackstone, but also by Governors Winthrop and Endicott, about the same period. John Josselyn, Gent., the author of *New England's Rarities*, and who arrived into the Bay of Massachusetts in 1638, says, "on the 11th of October, our master having been ashore upon Governor's Island, gave me half a score very fair pippins, which he brought from thence, their being not one apple tree nor pear tree planted yet, in no part of the country, but upon this island."

This assertion of Josselyn, that there were no apple trees at this time to be found in the colony, except those on this island, a tract of land situated in Boston harbor, and granted to Governor Winthrop, we do not credit. For we believe Mr. Blackstone's orchard was planted before the year 1638, and we are almost certain that Governor Endicott's fruit trees were planted in his orchard farm, as early as 1635, for we find in 1648, the old sturdy and worthy Puritan deeply engaged in the nursery business, and he actually sold to a *William Trask* five hundred apple trees, of three years growth, for two hundred acres of land. Such was the value of apple trees, and the cheapness of land at this period, that two trees would purchase an acre of land. This orchard of Governor Endicott's, the first one planted probably in the county of Essex, was situated in that part of Danvers, called the New Mills, and was a part of a grant of land of 300 acres, by the colonial authorities. The orchard was in front of the mansion-house, on a fine southern slope of land, running down to the river. This orchard and garden was laid out with considerable taste, in which was cultivated the apple, pear, plum and the grape, and enclosed with palisades. From the mansion-house, there was a walk, which led down to the river, through this garden, to a landing place, near which was a fine spring of water, overshadowed by willows. The landing place on the river was in a small cove or inlet, where lay the shallop used to convey the

Governor from his town residence to his orchard farm. In front of his mansion-house, was placed on a post his dial, which he brought from England, which we remember to have seen many years ago, in our boyhood. But of all this large orchard and garden, where the Governor, it is said, lived in a sort of feudal style, surrounded by his many servants and retainers, nothing remains to mark the spot, but the old pear tree. This old and venerable tree still contains considerable vigor, having outgrown grafts from it of eight inches in length, last spring; and it continues to bear considerable fruit. I gave an account of this remarkable tree, together with an engraving, in the 1st vol. of the Farmer, on the 73 page.

The cultivation of fruit trees, if we may credit Josselyn, increased wonderfully in New England, between the years 1638 and 1673. Josselyn published in 1675 his *Two Voyages to New England*, where he says, to use his own language and orthography, "our fruit-trees prosper abundantly, apple-trees, pear-trees, quince-trees, cherry-trees, plum-trees, and barberry-trees. I have observed with admiration, that the kernels sown or the suckers planted, produce as fair and good fruit, without grafting, as the tree from whence they were taken: the country is replenished with fair and large orchards. It was affirmed by one Mr. Woolcut, [a magistrate in Connecticut Colony] at the Captain's messe [of which I was] aboard the ship, I came home in, that he made five hundred Hogsheads of syder, out of his own orchard in one year. Syder is very plentiful in the country, ordinarily sold for ten shillings a hogshead. At the Tap-houses in Boston, I have had an alequart, spiced and sweetened with sugar for a groat, but I shall insert a more delicate mixture of it. Take of Maligo-Raisons, stamp them and put milk to them, and put them in a *Hippocras bag*, and let it drain out of itself, put a quantity of this with a spoonful or two of syrup of *Clove-Gilliflowers* into every bottle, when you bottle your syder, and your Planter will have a liquor that exceeds passada, the Nectar of the country. The Quinces, Cherries, Damsons, set the Dames a work. Marmalad and preserved Damsons, is to be met with in every house."

Our ancestors grafted but few of their apple trees, most of them being natural fruit, and used in the making of cider. It was the practice with farmers in early times, to select for the use of their families the best and fairest of the fruit, growing upon their ungrafted trees. Cider, until within a few years, was considered one of the staple products of New England. The old school books that described the agricultural condition of our country 40 years since, used to inform us, that no farmer considered his farm complete, without an orchard for the making of cider. The Essex Agricultural Society offered a premium for cider for many years, but it was finally struck from their list of premiums in 1839. In the transactions of the society for the year 1835, we find the following lament from the committee on cider, no one that year having entered for premium a single drop. Hear these witty and thirsty farmers. "The committee on cider beg leave to report—that they have, most of them, assembled after many weary miles of travel, without finding a single glass of cider, awaiting them to quench their parching thirst, or exhilarate their drooping spirits. Filled with the

milk of human kindness themselves toward every member of the laborious, meritorious and honorable society of agriculturists, without whose efforts the general population of the world would neither be able to eat good bread, nor drink good cider, they accordingly exceedingly regret the society's privation of *this* luxury on *this* memorable day. The premiums offered by this society are liberal, and your committee know no sufficient cause, when there is plenty of good cider made in this county, why it has not been brought forward."

Most of the books on the cultivation of fruit trees published 30 years since, contained large treatises on the manufacture of cider. One of the last of these books, the *American Orchardist*, by Dr. Thacher contains 38 pages upon the article of cider. But thanks to the Temperance Reformation, cider is but seldom made or used as a beverage in our community, and its mode of manufacture is no longer to be found on the pages of our fruit books. S. P. F.

Danvers New-Mills, Dec. 9th, 1851.

[TO BE CONTINUED.]

SELECTION OF APPLES.

Wishing some months ago to furnish a friend with a select list for an orchard of one hundred market apple trees, I was greatly surprised at the narrow limits within which I was compelled to confine myself. I was tempted to recommend to set the entire orchard with the *Baldwin* only; for this has proved to be by far the most profitable market apple hitherto cultivated in the Eastern States. But there are obviously some objections—at least so it seemed to my friend—to being confined to only one variety; and so after a great deal of deliberation, I recommended that one-half or more of the hundred trees should be *Baldwins*, and that the balance should consist of *R. I. Greenings*, *Hubbardston Nonsuch*, *Roxbury Russet* and *Porter*.

I hesitated to insert the *Roxbury Russet*, because it is not a very good bearer, and the fruit seems to be degenerating, three apples in four being knerly, wormy, or otherwise unmarketable. Still I retain it as being the *only* late keeping apple that I could recommend for general cultivation.

We have many other fine apples, I am glad to acknowledge. The *Early Williams*, for instance, is a beautiful, large, excellent fruit, but it is a mortal slow grower. The *Early Sweet Bough* is large, handsome, productive, and the tree grows well; but, as for all other *sweetings*, there is only a limited demand for it, most people considering such apples as valuable merely for culinary purposes. The *Duchesse of Oldenburgh*, *Gravenstein*, *Leland's Spice*, *Mother*, *Northern Spy*, and *Sutton Beauty*, all promise well, but none of them have yet earned a well established reputation in this section of the country. The *Esopus Spitzenberg* and *Peck's Pleasant*, are apples of exquisite flavor, but are not quite sufficiently productive. The *Ladies' Sweeting* is handsomer than *Danvers Winter Sweeting*, but its flavor is only second rate with me; and besides, they are both "nothing but *sweetings*."

Had my friend been at all inclined to experimenting, I should have recommended to him, as particularly worthy of trial, *Duchesse of Oldenburgh*, *Leland's Spice*, *Gravenstein* and *Northern Spy*, especially the latter; as we are actually en-

tirely destitute of any profitable late-keeping variety of the apple.

You are well aware that a list of apples for market is one thing; a list for home consumption is quite another; a list for an amateur, still something else. The first class must be handsome, productive and popular; the second must be various in flavor and in season of ripening; the third class must be—every thing.

A list of market apples is already given above; I would recommend for home consumption, (flavor, productiveness, &c., taken into account,) the annexed list.

SEASON.	DESSERT.	SWEETENING.
Summer,	Early Williams.	Early Sweet Bough.
	Porter.	Pumpkin Sweeting.
Autumn,	Gravenstein.	
	Hub. Nonsuch.	
	Leland's Spice.	
Winter,	Northern.	Danvers Winter Sweeting.
	Baldwin.	Ladies' Sweeting.
	R. I. Greening.	
Spring,	Roxbury Russet.	
	(perhaps,) N. Spy.	

In the present state of information in regard to this noble but neglected fruit, I should hardly feel inclined to extend the list farther, promological conventions to the contrary notwithstanding.

Should the above prove acceptable, I shall at some future time send you some notices of pears and other fruits.

Truly yours,

GEORGE JACQUE.

Worcester, Mass., Nov., 1851.

MIDDLESEX CO. AGRICULTURAL SOCIETY.

The Trustees of this old and time-honored society met at Concord on the 3d inst. and made partial arrangements for their operations during the coming year. No place was decided upon for holding the Exhibition, but it was voted that it be held at the place which the largest number of *new members* shall designate as their choice. This opens a fine field for competition, and we hope our Middlesex friends will improve it by increasing their numbers and funds so as to enable them to effect some improvements which they have in contemplation.

In addition to their usual list, the society will offer premiums this year on *wheat* and *flax*. There is now a new demand for flax on two accounts. One is the discovery of a process whereby the fibre is brought into a cotton-like state, so that it may be spun on the ordinary machines for spinning cotton. Two or three establishments have already sprung into existence in this State for the purpose of manufacturing linens, and with encouraging prospects of success. The other is the great demand for the crushed seed, or oil cake, as food for stock.

New efforts to raise wheat in this county, and we believe in other portions of the State, have been quite successful for two or three years past, and the Board of Trustees was induced to encourage

them by the offer of premiums. A fine spirit prevailed at the meeting, with a determination on the part of the Trustees to infuse new life and energy into all the affairs of the society.

E. R. HOAR, SAMUEL CHANDLER and SIMON BROWN were elected delegates to the Central Board of Agriculture for the ensuing year.

HEAT AND COLD.

The effects of Cold on Wine and Vinegar—On Seeds of Fruit and Trees—On certain Vegetables—Peculiar effect on the Potato and Pumpkin—A Valuable Fact.

Cold is supposed to be a negative property—the absence of heat—and the terms heat and cold are only relative, as compared with the sensations of animal heat; yet cold has some singular effects upon vegetable matter and fluid compounds. The peculiar properties of wines and vinegar are destroyed by freezing, as are many other articles. Many of the seeds of fruit and forest trees will not vegetate until they have undergone the action of frost, while the seeds of the locust and a variety of others, will not grow the first year they are planted, notwithstanding they are exposed to cold, unless they are *scalded*. All of these peculiarities may be owing to some mechanical effect, rather to any radical change on the chemical decomposition or composition of its constituents. Many vegetables may be entirely frozen, and if the temperature is raised slowly under water, or even in an air-tight vessel, no change can be discovered. A singular change takes place in freezing the pumpkin. The saccharine principle is so developed, that the concentrated juice is a very fair molasses, and as such, was extensively used during the revolution. The effect of both heat and cold upon the potato is altogether the most singular, and we began this article to mention this fact.

The potato contains a great deal of body—of positive animal nutriment, composed, like the bread-stuffs, of farina—starch and gluten, and a large portion of water. A potato, if frozen, and instantly put into cold water, does not recover, but is totally changed and lost; but if while in the frozen state they are thrown one by one into water constantly boiling, they are in no way affected, and are as edible as when first taken from the earth. This is an anomaly in the action of cold, which may also be true when applied to other vegetables, of which we are not advised; but it is a fact worth knowing, as it may on some occasions meet the necessities of almost any family—especially in those flat countries where cellars are difficult of construction.—*Rural New-Yorker*.

THE TOMATO IN VIRGINIA.—I note, also, a favorite mode of dressing the tomato in Virginia, is to *bake* it, without suffering the skin to be broken. The tomato is neatly browned, and is a very tolerable vegetable in this fashion. Here it is quite popular. I have seen a small man eat a peck or more at a sitting—in round quantities—then turn in upon the raw. At Barnum's the colored waiter corrected my English, when I called for "tomato." "Tom—" quoth he, dubitatingly. "Tomato! Oh! tomatusses, you mean." "Yes," said I, quite modestly, "it must be tomatusses!" Thereupon, with an indulgent smile, he supplied me.—*Correspondent of the Charleston Evening News*.

THE CHURCHYARD BEETLE.

Frazer's Magazine has lately contained a number of very interesting papers called "Episodes of Insect Life," from the last published one of which we make an extract, as follows:

A German named Gleditsch, who had laid some dead moles upon the beds in his garden, whether as examples of retributive justice for their defacement of his borders and walks, or for other good reasons, or for none at all, does not appear, observed that the bodies of the little gentlemen in velvet disappeared mysteriously. He watched, and found that the agents were beetles, which having first deposited their eggs in the carcasses that were to be the provision for their larvae, buried the bodies, so that they might be safe from predatory birds and quadrupeds. Into a glass vessel he put four of these insects, having filled it with earth, on the surface of which he placed two dead frogs. His sextons went to work, and one frog was interred in less than twelve hours—the other one on the third day. Then he introduced a dead linnet. The beetles soon began their labors, commencing operations by removing the earth from under the body, so as to form a cavity for its reception. Male and female got under the corpse, and pulled away at the feathers to lower it into its grave. A change then came over the spirit of the male, for he drove the female away, and worked by himself for five hours at a stretch. He lifted the body, changed its position, turned and arranged it, coming out of the hole, mounting on the dead bird, trampling on it, and then again going below to draw it down deeper still. Wearing with his incessant efforts, he came out and laid his head upon the earth beside the object of his labors, remaining motionless for a full hour, as if for a good rest. Then he crept under the earth again. On the morning of the next day, the bird was an inch and a half below the surface of the ground, but the trench remained open, the body looking as if laid out upon a bier, surrounded by a rampart of mould.

When evening came, it had sunk half an inch lower. The next day the burial was completed, the bird having been completely covered. More corpses were now supplied, and in fifty days twelve bodies were interred by the four beetles in this cemetery under a glass case.

THE SOAP PLANT.

From a paper read before the Boston Society of Natural History, it appears that the soap plant grows all over California. The leaves make their appearance about the middle of November, or about six weeks after the rainy season has fully set in; the plants never grow more than a foot high, and the leaves and stock drop entirely off in May, though the bulbs remain in the ground all summer without decaying. It is used to wash with, in all parts of the country, and, by those who know its virtues, it is preferred to the best of soap. The method of using it is merely to strip off the husk, dip the clothes into the water, and rub the bulb on them. It makes a thick lather, and smells not unlike brown soap. The botanical name of the plant is *Phalangium pomaridianum*. Besides this plant, the bark of a tree is also used in South America, for the purpose of washing. Several other plants have been used in different countries as a substitute for soap.

FARMER'S HYMN FOR WINTER.

O, Thou to whom our thoughts we raise,
Throughout the ever-changing year,
Teach us to fitly sing thy praise,
And bow to thee with love and fear.

Though nature die in icy death,
All hidden 'neath the wintry snow,
We know that thy reviving breath
Will cause her streams again to flow.

Omniscient source of every good,
In all thy ways we're ever blest;—
In ev'ry ill—well understood—
Thy constant goodness stands confessed.

Thy mercies, Lord, are ever sure;—
And when we view the snow clad plain,
Our hopes on Thee we rest secure;—
Thou wilt the summer bring again.

COLTS AND CALVES.

No idea has been much more common among farmers, than that colts until they got past their second year, needed but very little care; that they might wander unhoused and pick up a scanty subsistence from the coarse scatterings about the yard and barn; and that under this treatment they grew as well as they would if they were better fed and protected. Indeed, the idea extended much farther than this, even to the belief that good generous feeding and a warm shelter were productive of disease; that "the animal would contract humors and bad joints and be affected for life." How this grew up or from what process of reasoning it was drawn, it is difficult to tell. It has been put in practice for many years, and has been the ruin of many fine animals.

That colts should have considerable liberty in a safe place is as reasonable, as that a child should, and that they should not be fed upon rich and highly concentrated food, such as large feeds of corn, meal, oats or barley, is equally clear. But that small quantities of either of these with an occasional mess of carrots or other roots judiciously fed would be injurious to the colt, we look upon as an error.

The same idea prevails, but perhaps in a less degree, in relation to *calves*; they are obliged to occupy the meanest place in the barn—if they are so fortunate as to get in at all—are hooked and pushed about by the older cattle and fed upon meadow hay or the orts of the oxen and cows. Their hair is left uncombed, and skins unscratched, while filth is suffered to gather in untold accumulations upon their haunches, drying and hardening in the sun, until the bunches rattle when the creature runs, like a pocket of dried walnuts! This is all wrong. Calves cannot be made profitable without plenty of nutritious food with dry and warm lodgings. This is no fancy sketch, but just such management as we have witnessed through many years. But there are exceptions, where everything is reversed, order and neatness prevailing, and handsome annual profits being realized.

As regards capacity for thrift, we "think that the perfection of any animal depends essentially upon his good keeping from birth; and that severity or hard fare, or negligence while in a growing state, do an injury to the constitution, and so stint the growth, that no after keeping can repair it. The animal condition always suffers essentially by reverses. It is said that a sheep is never fat but once. Perhaps this assertion is to be received with some qualifications, but still it must be admitted as a difficult task to raise an animal from a low condition." If you keep no more animals than you can feed and grow well, they will in nearly all cases yield a compensating profit.

RENOVATING OLD ORCHARDS.

BY W. R. COPPOCK, BUFFALO.

In a former number of the *Horticulturist*, I detailed some experiments in progress for rejuvenating an orchard of old apple trees, by trenching, special manuring, and cleansing the bark by scraping, washing, &c. &c., (vide *Horticulturist* for March last.) Another season's growth has passed, and the results having become so apparent and decisive, I hasten to notice them, for the benefit of others similarly possessed.

These trees are from twenty to twenty-five years old, originally forming a part of a large orchard, now merely divided by a division fence, the general aspect and condition of all being alike. They have now had two season's growth since my application began, and marvellous are the results.

Not deeming in the onset, the fruit in its varieties, of the least possible value, being extremely small, knotty and bitter, at the same time unrecognizable, and aiming only to make the trees available, I grafted each season about one-third of the top with choice kinds.

By these processes a thorough metamorphosis has taken place. The growth of both new wood and grafts have been extraordinary, while the foliage which before was small and sickly, and usually fell off at mid-summer, has in every way changed; becoming large, beautifully green and full of vigor, while their neighbors on the other side of the fence, untouched by art and left to nature's skill, are denuded prematurely of their foliage and seared by neglect.

From the impetus given their growth by the stimulating cultivation they have received, the crop in quality—particularly in numbers—this season is but small, while the fruit itself has become entirely changed in all its characteristics. Before, no specimen could be recognized—while now from amid the ruin, we find the *Porter*, *Ribstone Pippin*, *Golden Reinette*, *Golden Sweeting*, *Swaar*, *Twenty Ounce*, *Detroit Red*, and other varieties in the perfection of size, form and color!

From forty trees, some of which bore but a few specimens, thirty barrels of picked fruit have been marketed, reserving some thirty bushels for home use.

Thus while we hear of various persons cutting down old apple orchards and delighting in the blazing fire that does not "snap," I feel amply repaid for the expense and labor in the successful experiments I have thus made in the saving of what was

deemed useless cumbrances, and producing therefrom a balance fully equal to twenty dollars each.

It is far easier to cut down and despoil a tree, than to replace one. So long as the tree is not radically diseased and rotten, but simply neglected, moss covered, and unpruned—its fruit in the mean time degenerated until all its characteristics of size, form, color, and flavor are changed, such trees may by judicious methods be so restored as not only to be profitable in their own fruit, but as stocks for grafting, forming if desirable entirely new heads.

Already have some of my grafts (two years old) began to bear, while all have taken such start that in a few seasons the whole tops will be blossoming with the Northern Spy, Wagner, Melon, Baldwin and other valuable kinds. Thus assuredly, aside from present pleasure and profit, ten years of time has been gained.—*Horticulturist*.

For the New England Farmer.

IS FARMING IN NEW ENGLAND PROFITABLE?

BY HENRY F. FREENCH.

Nearly two-thirds of the present inhabitants of New England are Farmers, by which we mean those who make Agriculture, in some of its branches, their principal business, and it certainly is a question of some importance, whether so large a portion of our citizens are engaged in the occupation most profitable to themselves, and most profitable to the community.

Again and again, do we hear the question asked, in one form or other, Is Farming profitable? Can you make anything by Farming? followed often by the assertion that Farming is the poorest business that can be pursued, and that nobody can live by it, in New England.

And yet it is a fact, admitted the world over, that nowhere, on the earth, does there exist a people so moral, so well educated, so well fed and clothed and sheltered, as this same New England community!

How is this admitted fact to be reconciled with the idea which prevails so widely—an idea that banishes so many of our young men from the homes of their fathers—that New England soil does not yield an adequate support?

There are several classes of men who propose these questions. There is, in the first place, the class of those whom Mrs. Trollope adopts as the type of the whole Yankee nation, two of whom, she says, never talk together five minutes without using the word *dollar*.

These men have no idea of wealth, or worth, or comfort, or prosperity, except as it be measured by "the almighty dollar!" They seem to imagine the great end and aim of their pilgrimage on earth to be, *to die rich*, and are ready to bow down and worship any golden calf, whether on four feet or two, so they be certain the gold is there!

Some of these men are of the *grand* order of creation. They fancy that splendor is happiness. They would have services of gold and silver upon their tables, ride in splendid carriages, and be "clothed in purple and fine linen, and fare sumptuously every day." They can conceive of no idea of Happiness, except it be a gilded image.

As to *labor*, they regard it as degrading, and fit only for *servants* and men of the *lower classes*. They have no conception of a higher state of exist-

tence, than that of the Gods of the Epicureans—a state of perfect repose and freedom from labor and care. To them, Farming seems a very paltry business, which is likely to give them no such position above other men, as they seem to deserve, and which affords very little prospect of the realization of their idea of the true dignity of man.

A man of this class is, as Mr. Weller senior said his wife was—"too good a *creeter* for this place," and the sooner he leaves, the better for those who remain.

Then we have the *cheap* order of men, who worship the same image, and just as devoutly, though their forms of devotion slightly differ. A man of this order can *lay up money* faster in some other way than by agriculture. He buys, not live stock, but *stocks*. He owns no land, because land does not pay two per cent. a month, in hard times. He finds it *cheaper* not to marry, or if he has been guilty of that youthful piece of extravagance, he owns no house—it is *cheaper* to hire one. He has the satisfaction of knowing just how much everything *costs*, and constantly associates the idea of the *federal currency* with breakfast, dinner and supper. He keeps no horse—it is *cheaper* to walk—no dog because dogs eat, and earn nothing, and entertains no guests—it is so expensive. He always complains that he is over-taxed, and abuses the collector, and expresses great surprise at the extravagance of the rising generation. Above all, he wonders that any man should *spend his money* in farming, or gardening—in planting trees of which he may never live to eat the fruit, or shade trees for the benefit of posterity, when posterity has never done anything for him!

He feels, at heart, as if it were not exactly safe, to put seed, that *costs money*, into the ground, and trust to Providence so long for a return, when he can make a *sure thing* of it, by loaning the cash on a mortgage. He *knows* that Farming *don't pay*.

But let us examine the question fairly, not with any narrow, selfish view, but with due regard to the *general good*. The true wealth of a State consists in its means of providing its citizens with the necessities and comforts of life, and the best moral and intellectual education, and hard as is our soil, and severe as is our climate, no people lives, or has ever lived, more highly blessed, in such riches, than we of New England, who cultivate the earth.

If it be decided that Farming is not profitable, what is to be done? Shall we desert New England, leaving our land desolate and seek a more fruitful region? This question is too absurd to need a reply. Shall we engage in manufactures, and collecting in large towns, like Manchester and Birmingham in England, become the dependents of party legislation, put our labor in equal competition with the pauper labor of Europe, rise and fall with the Tariff, and starve when the wheel of the Factory stops? A manufacturing people was never, in all history, a moral people, nor can it be long a free people. The centralizing influence of *capital* is repugnant to the true idea of Republicanism and equality, and although the policy of New England may be to encourage manufactures, to a certain extent, let us pray that no interest become paramount to that of Agriculture, for when associated capital pays for all the labor, then will money control the votes of the laborers, and destroy the freedom of the people.

No, the true, the only policy for New England

is, to depend mainly on her soil. The new and fruitful fields of the West, for a time, may entice away our young men. The chances of *trade* are tempting to many; yet more than ninety of every hundred who engage in it, sooner or later, are bankrupt. The *professions* are crowded with men, who lead an anxious and a *useless* life of disappointment. The fatal confidence, which assures a man that he shall be the *last* to fall in battle, and the *first* to gain the prize in a lottery, urges many to their graves, in search of gold. And thus it will ever be, but the mass of our people will remain upon their native soil, and he is the true philanthropist, who, instead of sneering at the occupation of the Farmer as unprofitable, teaches others to regard it with respect.

The fact is, that in most parts of New England, Farming, in one or other of its branches, is a good business—a business which gives a sure support to the man who is willing to live in habits of industry and economy, a business which places him far above the masses of the people in any other country, a position, which illustrates, as has nowhere else been done, the true dignity of labor. If this occupation affords no prospect of wealth, it gives assurance of a competency. If it hoards up little gold and silver, it gives pleasant homes, and pure hearts. If it gives no high posts of honor, it creates no slaves. If it makes little money, it makes abundance of those things for which others gladly exchange money, and it gives, what money cannot purchase, a life of health and peace. What more than this can be expected of any *general* occupation in life? In the nature of things, all cannot be *rich*, for riches is a comparative term. All cannot be distinguished, for distinction implies inferiority somewhere. The conclusion must be, that it is the mere restlessness of a selfish ambition, which nothing can satisfy, rather than the cool judgment of a broad philanthropy, which renders so many dissatisfied with the employment, which is the right arm of power in New England. Upon the whole it is probably true, that the condition of the farmer in New England is better now, all things considered, than that of any other *whole class* of our own citizens, and his prospects are brightening every day.

Advances in knowledge of the principles of agriculture, improvements in the modes of cultivation, and in farming implements, in the breeds of stock, in the varieties of fruits; the effects of steam navigation in bringing distant markets near—a thousand circumstances are tending to encourage the farmer, and elevate his position. But to maintain this position, he must be awake and in earnest. He must bring to his business the same energy, the same industry, the same *systematic* efforts, which are essential to success in other pursuits. He must *understand his business* thoroughly, and by intercourse with his fellow-men, and by reading the best publications of the day, avail himself of every means of improvement.

Again, the Farmer needs yet to learn to appreciate the advantages of his situation and to cherish a proper spirit of thankfulness. He should learn that *money is not wealth*. A quaint old writer illustrates this idea by telling of a man who labored hard all the time for money, which he expended in buying *boots and shoes*, which he carefully laid away and kept, which rightly enough, he concludes,

was just as wise, as to treasure up gold and silver which one will never use.

The farmer regards the minister's salary of six hundred dollars, as a generous support for his family, but if he would consider, that from his own farm he derives his rent, and fuel, and meat, and milk, and butter, and vegetables, and a thousand minor articles, for which the salary must be paid away—if he would cipher up carefully, the cash value of what he and his family thus annually consume, he would find, to his surprise, perhaps, that his own family must practice a far more rigid economy than now, to live upon so small a sum!

Is Farming profitable in New England? If to be quickly rich in gold and silver, if to live in luxury and indolence, if to gain individual power and distinction among men,—if these alone “profit a man,” then the question must be answered in the negative.

But if to have a home of quiet and refinement, with abundance of the comforts of life, with advantages for social, intellectual and religious cultivation, unequalled elsewhere, with “neither poverty nor riches” to “clog us with weary days and restless nights,” if to gain our daily bread by healthful labor, and gain it, too, with the consciousness that our gain is *not another's loss*, if to occupy a position of comparative exemption from the cares and perplexities which attend professional or mercantile life—

“Our best companions, Innocence and Health,
And our best riches ignorance of wealth,”—

if this be “profitable,” then is the occupation of the Farmer, in the highest degree, to himself, to his household, and to humanity, a profitable employment.

H. F. FRENCH.

Exeter, N. H., Dec. 29th, 1851.

THE SHEPHERD'S DOG.


Without the shepherd's dog the whole of the mountainous land in Scotland would not be worth sixpence. It would require more hands to manage a flock of sheep, gather them from the hills, force them into houses and folds, and drive them to markets, than the profits of the whole stock would be capable of maintaining. Well may the shepherd, then, feel an interest in his dog. It is, indeed, he that earns the family bread, of which he is content with the smallest morsel. Neither hunger nor fatigue will drive him from his master's side; he will follow him through fire and water. Another thing very remarkable is, the understanding these creatures have of the necessity of being particularly tender over lame and particular sheep. They will drive these a great deal more gently than others, and sometimes a single one is committed to their care to take home. On these occasions they perform their duties like the most tender nurses. Can it be wondered at, then, that the colley should be so much prized by the shepherd; that his death should be regarded as a great calamity to a family, of which he forms, to all intents and purposes, an integral part; or that his exploits of sagacity should be handed down from generation to generation, and form no small share of the converse by the cozy ingle on long winter nights?

¶ The attention of the reader is particularly called to the communications in this number of the Farmer. That upon the question, “Is Farming in

New England Profitable?” treats upon the matter in so clear and practical a light that many will find sufficient conviction in it to induce them to establish a home where their fathers have lived and died before them. The “History of the Apple Tree” in this country, is to be continued, and will be found highly interesting to all who ever eat an apple. The “Experiment in Poultry” affords that exact knowledge which is precisely what is needed, and which we assure the writer we fully appreciate. The tribute he pays the agricultural press we believe to be just, and as the writer is a constant reader of the Farmer we take a portion of the praise to ourselves. After all, it is such as himself that gives any agricultural paper a very considerable portion of its value. We think it not too much to say, that our correspondents as a whole have never been excelled by those of any similar paper in the country. Several of them of high attainments in the Sciences and Arts, are yet with others eminently practical and safe advisers.

POMOLOGICAL.

Three specimens of apples have been received from Mr. JOHN PAGE, of Pittsfield, N. H. It is always extremely difficult to decide with satisfaction even to ourselves, upon some of the fruits which are sent us for examination; and before giving our own opinion we often submit them to the examination of those who are really as competent to decide upon them as any persons among us. They, however, almost always disagree among themselves; of course we speak of fruits which are supposed to be uncommon. “Who shall decide, then, when doctors disagree?” Neither of the specimens are common in this vicinity, nor are they of such size or flavor as would recommend them strongly in the market. The Baldwin, the old English, or Hunt russet, or the Ladies Sweeting are far better than either of them. As the russet and the light green apples—one being slightly acid and the other sweet—are good bearers, they may be profitably raised for cows or swine, and we would therefore not recommend changing the trees for any other kind.

THE OHIO FARMER.—A new weekly paper bearing this name has been established at Cleveland, Ohio, by F. R. ELLIOT, as Agricultural Editor, and L. S. EVERETT, editor of the Mechanical and Literary department. Its whole appearance betokens that its conductors have been in the newspaperial kingdom before. Its agricultural editorials and selections are excellent, smacking strongly of the farm. We extend the editorial  to our new neighbor, and call upon all Ohioans and the “rest of mankind” too, who need more light, to “walk up to the captain's office and” subscribe.

¶ No one learns to think by getting rules for thinking, but by getting materials for thought.

MANN'S PRAIRIE STONES.—(See Page 83.)

MARSH'S PRAIRIE STEERS.

We present our readers this week with a view of a pair of mammoth steers, raised on the prairies in McLean County, Illinois, by Mr. Isaac Funk, a celebrated cattle raiser, and subsequently purchased and stall-fed by Mr. SYLVESTER MARSH, of Chicago, the present owner. They are estimated to weigh nearly 4000 pounds each, and Mr. M. claims that they are the largest and handsomest cattle in the United States. They measure fifteen feet from the nose to the end of the tail, and over three feet across the hips, and are five feet ten inches high. Their girth is between nine and ten feet each. They were never yoked, but run upon the prairie till within about a year.

Mr. Marsh, who is the largest beef packer in the United States, went from this market to Ohio in 1828, and thence to Chicago in 1834, and packed the first beef that came through the Erie Canal. He commenced business in Chicago before a slaughter-house had been built, and hung his first beef upon a tree. Now, 70,000 barrels are packed in that city annually.

For the New England Farmer.

COWS AND CARROTS.

BY J. G. HOTT.

FRIEND BROWN:—I have a heifer two years old last spring, which did not take the first prize the present season at our State Cattle-show, for the simple reason, undoubtedly, that she did not, from a shrinking delicacy peculiar to her sex, "go to the Fair." But however this may be, I am very proud of her, and though she is now, with the thermometer 16° below zero, giving me seven quarts of milk that is milk per day, yet I am fully convinced that her "faculties," as somebody says in Barnaby Rudge, "are not half drained out." It is as yet an unsolved problem with us small farmers in country villages, how we shall get the most milk with the least expense out of our one cow.

A gentleman, who owns a very extensive farm in Bradford, Mass., and whose fifty cows "give down" some \$2000.00 worth of milk per year to the Haverhill people on the other side of the river, made some suggestions a few days since, in a conversation with a neighbor of mine, which are new to me on this subject, and which, if I mistake not, are not in accordance with the current notions of the day. He stated, as his deliberate opinion, that carrots, of the virtues of which we have heard so much of late years, do not contribute in the slightest degree to increase the amount of milk in a cow. This proposition he bases upon the result of repeated experiments. He has, for instance, fed his cows, or a certain number of them, on good hay for a fortnight, and, measuring the milk exactly, night and morning, "taken a note of it and turned a leaf down," as Capt. Cuttle says. He has then, the next fortnight, in addition to the good hay, given the same cows carrots, varying the quantity from a peck to a bushel per day, for each cow, and yet without any increase whatever in the amount of milk. He maintains, therefore, that while the quality of milk may be improved by carrots, the

quantity is not perceptibly affected. He thinks, further, that the carrots, when fed out in ordinary doses, do not diminish in the least the quantity of hay necessary for his cows; but that they serve merely as condiments; on the same principle, I suppose, that pickles and cranberry sauce enhance rather than lessen the enthusiasm with which we, bipeds, invest roast turkey. Under all these circumstances, he is decidedly of the opinion that \$3 per ton is quite as much as a man can afford to pay for carrots to tickle the palate of a pet cow.

Now, Mr. Editor, can these things be so? Is the prevailing impression in regard to the good qualities of carrots altogether erroneous? Have no other milk-makers made careful experiments, which, if stated with precision in your journal, might confirm our wavering faith in carrots? Why not let James, your Corkonian "divine cowherd," as Homer calls him, "devote his behaviors," in part, for a month or so, under your eye, to experimental researches into this subject, and then give us an eclogue from your own Bucolics? We shall then "know what's what."

Of the various other articles of fodder given to cows in the winter, it was the impression of the Bradford farmer referred to, that linseed oil-cake was most efficient in increasing the quantity of milk, corn-meal next in order, and shorts third. The principal effect of beets or mangel-wurzels is, according to his observation and experience, to deteriorate the quality of the milk without exerting a compensating influence upon the quantity. Potatoes, however valuable they may be in this connection, at their present high price are of course eaten only on stone china and with silver forks. Now in regard to the three first articles, the oil-cake, when flax-cotton becomes a substitute for Southern cotton—"a consummation devoutly to be wished"—will undoubtedly prove a luxury to cows and a source of wealth to dairy-men, but the present crops of flax are so "few and far between," that oil cake, like some other kinds of cake which we wot of, can be dealt out only on rare and extraordinary occasions. The choice, then, if the preceding views of one of the most extensive farmers in your State are just, must lie between corn-meal and shorts—a choice which can be determined only by a careful comparison of the relative prices and virtues of each. Pray tell us all about this matter and more too. As Hamlet hath it, "Carrots, corn-meal or shorts, that is the question."

Yours, truly,

Exeter, N. H., Jan., 1852.

J. G. HOTT.

REMARKS.—The subject which our friend treats so pleasantly is one of more importance, perhaps, to us who "make milk" for market, than to the villager "with his one cow." We have often made inquiries of experienced persons in relation to this matter, and will state their opinions, but without being able to furnish any exact information as the result of reliable experiments. In a conversation with Mr. HOLBROOK, our associate, he stated that he had raised and fed out roots in large quantities, and watched their effects upon the flow of milk, flesh and general thrift of the animals, and after some years of experimenting came to the conclusion, that carrots do not, ma-

terially, increase the quantity of milk, but do increase the amount and quality of butter.

That fed in moderate quantities they promote appetite and digestion, and do not decrease the amount of hay.

That beets and potatoes increase the quantity of milk at first, but depreciate the quality, and that if continued long they are injurious to the system in consequence of their cathartic and diuretic qualities.

That oil-cake and corn-meal are highly stimulating—too much so for a permanent food for valuable cows. But that if he wished to obtain the greatest amount of milk for a short time he should feed liberally on these two latter articles.

That shorts are nutritious, without being severely stimulating; that if scalding water is poured over them three or four hours previous to feeding, so as to soften and swell them, their nutritious properties are easily assimilated; that they promote a healthy appetite and digestion, increase the quantity and quality of milk, and preserve the system in a natural and vigorous condition. Three or four quarts of shorts a day will not decrease the amount of hay required.

Young cows, he thinks, should be fed very cautiously on any of these specific articles of food; believing them too stimulating for the permanent health of the animal.

We have also conversed with several gentlemen at present engaged in furnishing milk for this market. One of them, Mr. J. B. FARMER, of Concord, says: "I never have found that carrots increased the quantity of milk immediately, like sugar beets and parsnips, but their effect is as great in the end, as any root I have ever used, unless it is parsnips. Carrots are advantageous in several ways; they add greatly to the quality of the milk, and quantity of the butter. If fed to cows that are suckling calves, the calf will be much fatter, while the cow will gain flesh, which bears much on the old adage, 'that a cow well wintered is half summered.' In regard to the saving of hay, I have never been able to perceive any; the reason I assign for that is, that they keep the digestive organs in such perfect tone, that they are ready and willing at all times to eat anything that is reasonable. A cow fed liberally on carrots will last for the dairy nearly or quite as long again as cows fed on meal, particularly oil meal. Finally, carrots may be considered like bread cast upon the waters, which after many days cometh back again."

In looking at these opinions of men who are certainly as competent to judge as men can be, without entering into precise experiments by weight and measure, our correspondent will find that they agree pretty nearly with those of the Bradford gentleman. They are conclusions at which we had arrived, and on which we intend to practice. We shall continue to cultivate and feed carrots to our cows,

notwithstanding we "make milk" for the Boston market, and if it benefit the consumer there as much as we believe the carrots do the cows, we shall be satisfied with their operation.

Dr. Lee, editor of the *Genesee Farmer*, says that "one hundred pounds of carrots ought to yield at least fifty of milk, in good cows."

If our friend desires to keep but one cow, not to see how much milk he can get, but how rich it may be and how constantly he may obtain it, we advise him to procure a good Alderney. She will be too ugly to be stolen, and no one will tempt him as now with big offers to part with his beautiful heifer.

AGRICULTURAL.

A sailor friend writes me that he lately "boarded" the island of St. Thomas, off the coast of Africa, and saw the natives ploughing exactly in the old Bible fashion. They had sorry teams and were ripping up the fertile soil with sharp stakes, just as if a cast-iron mould board had never been heard of. He saw also a specimen of threshing that he had heretofore considered as belonging to the primitive ages. A mass of grain was collected in a yard, and some animals were cracked round over it at a lively pace. A fellow in charge of the job laid it over the cattle as if thrashing indeed.

I commenced this article with the intention of writing about *Tools*, and their importance to the farmer. I need only refer your readers to the many mammoth establishments in Boston, and their enormous business, to show how desirable the community already deem it to be supplied with suitable tools. Within ten years there has been a great change. Farmers spend more every year for tools, and less for labor to accomplish the same work. Let me give you an example:

A number of years ago I employed two men by the day, to fill carts with rich soil from a bank of flood deposit by the river. I had two carts, and the men filled one while I drove the other away. They used shovels. The soil would stick to the shovels, and the blade must be rapped continually to keep it in order. The shovel went in hard the soil was so adhesive; and when it was unloaded there was a hard wrench given to the arms. About this time I met with an eight-tined fork—price four dollars. I bought it, and found to my surprise that one man now would fill the carts as quick as two before—and easier. It was not pleasant thinking how much I had lost by not having the article before! But I noticed, occasionally, that the finest soil would slip through—there was some waste. Well, I happened to see a ten-tined fork, price five dollars; I took that home, and found that it was superior to the other for all but the top layer of sods. It would go in easier and never clog. There was a spring to it, too, when unloading. I now found that my man filled the cart while I was gone and gained time to eat apples and smoke besides!

I might give other illustrations from my own experience, showing the saving in having the best tools. I have suggested that there is no comparison between the equipment of the farms now and that of ten years ago. Still there is room for further improvement. I shall not give offence to any

brother farmers when I say that there is not yet that spirit of inquiry among them, which among manufacturers leads them to endeavor to economize the production of their goods. We have lumbering, unwieldy, inconvenient vehicles,—carts flung together by bunglers, instead of being made on scientific principles. Who has not seen scores of cart bodies made narrow and long, hard to fill and harder to “tip up?” What a saving if Scotch cart bodies could be substituted; short, light bodies, and sides flaring to the very wheels. We still have the old wooden axletrees everywhere, which are kept free from dirt with great difficulty, need greasing often, and go hard then.

How often the remark is made, “If I had only known of this before.” Well, there are a good many improvements yet to be introduced. The ignorant natives of St. Thomas are anxious for nothing better. But with us it is not a stand-still age. True, we are to “hold on to that which is good,” but, also, stretch our arms for more of the same article. In no direction can we grasp more aid than in gathering about us all good and necessary tools. Parsimony here is ruin; a liberal and judicious expenditure a precursor of success.—*Commonwealth.*

LABOR NOT A CURSE.

Many there are in this little world in which we live, who fancy to themselves that the unfortunate act of old father Adam has been the cause of all necessary labor, and that, had he walked uprightly, all earth's inhabitants might have lived in perpetual luxury. Their notion covets the happiness of the sluggard, as the state of earthly bliss which is most desirable.

In what we had to say last week upon the origin and dignity of Agriculture, the fact was made plain that man was created for employment, not for a happy state of idleness.

We have a few more thoughts to express, which have some relation to the same subject; and the present may be as proper a time as any for their expression. We are aware that many good men have taught the people to believe that God cursed man into agriculture because he had sinned. But we do not so understand the good book. In our judgment it teaches very plainly that God, from the beginning, designed the earth to be cultivated; and appointed man as the agent of his design, for its accomplishment.

But our attention is called to the following quotation from the scripture: “And unto Adam he said, Because thou hast hearkened unto the voice of thy wife, and hast eaten of the tree of which I commanded thee, saying, Thou shalt not eat of it; cursed is the ground for thy sake, in sorrow shalt thou eat of it all the days of thy life; thorns also and thistles shall it bring forth to thee; and thou shalt eat the herb of the field. In the sweat of thy face shalt thou eat bread, till thou return unto the ground.” In all this there is not an intimation that the ground was to be cursed with barrenness, that it should not produce without cul-

ture; but it should be cursed by an overgrowth of thorns and thistles, by reason of man's weakness and inefficiency as a cultivator, doomed as he had become to sickness, sorrow, pain, and finally death.

The history of all that is past confirms this interpretation of the sacred scriptures. Where a vigorous hand has been applied to the work, these thorns and thistles have been subdued. Where weakness or idleness prevails, there the curse is seen, and thorns and thistles cover the face of the ground.

Truly good men love industry, while a man who covets idleness as a state of bliss is neither fit for heaven nor earth.

The apostle to the Gentiles said, that the ground which brought forth briars and thorns was nigh to cursing and burning.

With all these things before us, it is evident that the blessing of Providence is secure to the cultivator of the soil, while a natural curse comes upon the ground wherever the idler haunts it with his abominable presence, or wherever pining weakness falls beneath the task of faithful cultivation.

The fond theory that idleness is bliss, and that labor is a curse, is well suited as a gospel well pleasing to the hearts of loafers, and those who by the knotted lash wring out the toil that comes not for its hire. But who that knows the world, and does not know that industry and virtue travel together through all the earth? Where idlers are, there vice is creeping in. The hand that never toiled is coupled with the heart that never longed for elevation and improvement.

Labor dishonorable—a curse! So reasoned the robber and the thief. But he who lives for useful ends must take his place among the workers. Away to the forest or the field. A healthy and a happy life to you, man of the plow, and man of the spade. Let the lover of idleness sit dreaming of happiness as a gift that drops down from the stars. He will sit and dream, until he sees his brother dreamers safely lodged in appropriate boarding houses, jails and prisons. But the working man, by honest toil, shall bless himself and all his kind, and beat out, dig out, or hew out happiness for his mortal and earth-bound state; and praise his God in honest gratitude for the appointment of labor and toil to all the sons of Adam.

THE SOUTHERN PLANTER. Richmond, Va.: FRANK G. RUFFIN, Editor.—This old friend comes to us from the fertile banks of the James River. We have passed many pleasant hours upon its sunny slopes, observing the course of husbandry practised there by our brethern. As long ago as 1843 or 4, the *Planter* made copious extracts from our articles upon Virginia Farming, published by the late Gov. Hill, in the *Monthly Visitor*, and for our freedom of expression upon some of their modes of cultiva-

tion, the *Planter* gave us a pretty severe trimming. But it led to a pleasant correspondence which now gives that paper the aspect of an old friend. We wish it abundant success.

For the *New England Farmer*.

WINTER EMPLOYMENT.

MR. EDITOR:—Winter is to farmers peculiarly the season for mental effort.

At this season, they have a great deal of leisure time that could be no better taken up, than by earnest endeavors to improve their minds—and much, very much might be done in that way, if they only had the disposition to avail themselves of the opportunity thus afforded them.

During the stormy days, when no one can work, and the long evenings at this season and for two months to come, they might accomplish a great deal. With a mind free from the embarrassing cares incident to most other situations in life, with peace and plenty within their borders,—at peace with all mankind, farmers can sit down to their cogitations with a greater zest, a clearer head, and a more unbiassed judgment, than any other class of men.

They can scan with eagle eyes their Agricultural journals (which we premise no good farmer would be without,) that come home to their dwellings, laden with the theories and recorded experiments of the most intelligent cultivators throughout the land,—these will naturally stimulate them to thought, and comparison of the modes and results of others with their own observations and labors—can draw their own conclusions without fear or favor, and write them out in full in their note-book—kept for this especial purpose—so that they may be able to turn to them at any future time, should occasion require. There is now ample opportunity to run over the operations of the past year,—see where they have miscalculated, and they will then be able to avoid those mistakes the next,—their Meteorological, Thermometrical and Barometrical observations and phenomenas should be carefully compared with years past, and any particulars noted in their book—the birds and insects injurious to vegetation should claim also a passing thought; any new facts in this department should be carefully noted down, and some method of lessening their depredations on future crops be decided upon, if possible. Such a diary would be valuable to all the farming community as well as interesting to the general reader.

Again—farmers are usually inclined to segregation, partly from habit, and partly from necessity;—it therefore behooves them to mingle together, as much as possible during the winter. It is a good idea, to organize an *Agricultural Club*, and hold meetings once a week or fortnight, perhaps, at each others' houses, and discuss the various modes of growing crops,—the forming of the compost heap,—feeding of stock—the breeding of stock—the reclaiming of low lands—the draining and irrigation of the same—the eradication of the Canada thistle, burdock, and other useless weeds—and indeed, all the various questions that immediately concern them in their vocation. Such clubs are very easily arranged;—just let a half dozen spirited farmers give notice that at such a time and place a meeting of farmers will be held, and the thing is done; such meetings, beside the ad-

vantage to the agriculture of the town, will have a good social effect—it will bind the inhabitants close together, because they would be perhaps the only meetings, where all, of whatever politics or religion, could meet and feel at home.

In connection with these clubs, a *Tree Society* might be formed, for the purpose of setting out shade trees by the road side, to beautify the town; this also, in addition to the improvement in the looks of the highways, would form another inducement to keep the younger portion of the community from leaving their country homes. Throwing all these aside, the pecuniary advantage of such a movement, if carried into effect, would warrant the trial,—as in all instances handsome shade trees have invariably enhanced the merchantable value of real estate.

This being the season of the year when schools are kept in the country—farmers should be perfectly conversant with the state of District Schools, see that they are properly provided with all the paraphernalia of well appointed schools—that the teachers are competent to their task—that proper studies are pursued—and “last but not least,” see that their children attend every day and in season, in order that they may be properly educated in the various English branches.

Thus, Mr. Editor, I have enumerated briefly some of the ways for farmers to employ their spare time during the winter months. One more and I have done, and that is, that they should make copious extracts from their note-books, with their comments, and send them to the *New England Farmer* office for publication, that they may be scattered broad-cast over the land, for the example and benefit of others.

J. B. D.

January 7, 1852.

FARMER'S MONTHLY VISITOR.

The late Gov. HILL, of Concord, N. H., published a paper with the above title through a period of some ten years, every number of which we carefully perused. With the failing health and energy of the editor the Visitor declined, and was discontinued. It has been revived, is published at Manchester, and edited by O. E. POTTER, Esq. There are now two agricultural papers published at Manchester. The *Granite Farmer*, now in its third volume, and the *Visitor*. The *Visitor* is in the book form, is handsomely printed, and contains many valuable suggestions and articles upon farming topics.

THE VALLEY FARMER. St. Louis: EPHRAIM ABBOTT, Editor.—We are always happy to receive our friends from the West. There are many cheering indications of a new interest in agricultural pursuits in all portions of the country. Many of our exchanges appear in new dresses at the opening of the year, and the *Valley Farmer* among them. We hope it will soon find it necessary to get a “fast press.”

COUNTY TRANSACTIONS.—We are under obligations to the gentlemanly officers of the Worcester, Essex and Plymouth County Societies for handsome copies of their Transactions during the last

year. May we ask of each of the other Societies to send us a couple of copies of their printed Transactions and Bills, and as Secretary of the Middlesex Society we will send them ours.

For the New England Farmer.

A GEORGIC ABOUT TREES.

Trees furnish us with fuel, timber, fruit;
Yet not for this alone I press their suit.
They have their language, sympathies and voice:
With hearts that leap for joy they can rejoice,
And mourn with mourning hearts. If happy thought,
Or hope, or love returned, or good deeds wrought
With softest sunshine, fill your soul and eye,
To all this sunshine woods give glad reply.
The joy for which tongue hath no utterance,
Is voiced in music by the streamlet's dance.
Feelings that struggle at your lip for words,
From smiling trees are syllabled by birds.
Or should bereavement, pain, ingratitude,
People your breast with sorrow's sullen brood
Of wretched thoughts, and human accents rasp
Your wounded spirit, and the proffered grasp
Of friendship's hand seem icy cold and hard;
With no such rudeness will your peace be marred,
When to the hushed and twilight grove you wend
For friendship's self, without the selfish friend.
From whispering leaves, and insects' hum, and grass
Fragrant beneath your footsteps, there shall pass
Such soothing influence to your breast, that ere
Your griefs are told, they turn to holiest cheer.

REMARKS.—The above is an extract from "A Georgic about Trees," read before the "Young Men's Association at Yonkers, N. Y., by Prof. EDWARD NORTH, of Hamilton College. It contains language and sentiments that come home to our heart. We always feel as though we had found a kindred spirit in him who loves and protects trees; and he who has no fondness for them should have no control of our child, or scarcely of that of our horse.

CO-LABORERS.

We copy the excellent article below from the *Journal of Agriculture*, and recommend it especially to our neighbor of the Ploughman, believing he may find much "aid and comfort" from its perusal.
—Ed. Farmer.

Like yourself, I regard the workers for improved Agriculture, whether upon the soil, in the laboratory of the chemist, or at the desk, as engaged not as rivals, but co-laborers in a common cause.

Indeed, one of the charms of this pursuit, is the kind and generous feeling by which all engaged in it are actuated. A farmer has no secrets. He has no fear that some neighbor will learn how he raised his premium crops, and follow his example, but he is anxious that all the world shall profit by his success. So with the scientific agriculturist. Go where he may, he is greeted as a friend and a brother, by every reading, thinking farmer. At this very moment, the character of a scientific farmer is a better passport through New England, (the cities perhaps excepted,) than any other, literary or political.

And so, finally, with agricultural writers, whether

editors, contributors, or book writers. The circulation of one (agricultural) publication is not regarded as acquired at the expense of that of another.

The man who reads no paper, is almost hopeless. We have not "the place where to stand" to move him. But he who reads, has attained some idea of his own ignorance. There is hope of him. He will want to read more. He who has a few books soon wants a library. He who reads one agricultural paper, soon must look farther. He soon finds the earth not so cruel a mother as he had supposed. Improved husbandry enables him to gratify his new taste, and he becomes a studious farmer.

It is a relief to turn from the ill-natured, cannibal warfare of our political press, where detraction seems the only imaginable mode of promoting equality, to the courteous and charitable spirit of our agricultural journals.

The writer on agriculture is constantly impressed with the consciousness that his subject is greater than he can fathom—that he is dealing with agents and forces, which he may name, but can never comprehend. He speaks of light, of heat, of electricity, of chemical affinities, of the life-principle, but of their essence, he feels that he knows nothing. He only knows of some of their results, and for these results even, he can give no reason. *It is so, because God so wills it.*

If then he sees his brother err, he points not at him the finger of scorn, but gently corrects him, and where he finds a wiser man than himself, he humbly learns.

On politics, there are the *ins* and the *outs*, and the *lean kine*, like Pharaoh's, have ever a carnivorous feeling toward the better fed, and this longing regard is reciprocated by a propensity on the other side, into which Jeshurun fell, as the good book tells us, when he "waxed fat and kicked."

Even in the religious press, there is not wanting something of this same spirit of rivalry—a strange anxiety rather, that Heaven shall be gained by some particular road, or not at all, than any kind co-operation for the grand result.

With the agricultural press, as yet, it is not so, and God grant it may never be.

With our party, there are no *ins* and *outs*. What the farmer gains, is not from his neighbor, not from his opponent. The old saying that "one man's gain is another's loss," applies to many, but not to him. He may grow rich, and no man be the poorer. A kind Providence has so ordered it, that his soil even, from which he gains his support, if properly cared for, shall never be exhausted.

With such views of the position of the agricultural press, I have ventured once more to address you.

Assuring you anew of my best wishes for the success of your able and interesting Journal, as well as for yourself personally,

I remain your friend,

HENRY F. FRENCH.

Exeter, N. H., Nov. 26, 1851.

AMERICAN PEACHES IN LIVERPOOL.—The Liverpool Mercury says that "it is well known that the U. S. produce immense quantities of that most delicious fruit, the peach; and, so far as we have heard, none have ever been brought into this coun-

try. A gentleman on board the *Africa* has, however, made the attempt, and, with some care, has succeeded in bringing them in a perfect state. He has brought them as a present to the family and friends of a gentleman farmer in this town, and may therefore claim to be the first importer of ripe peaches from the United States to England."

WINTERING DOMESTIC ANIMALS.

Within the wide range of the science and practice of farming, there is none of higher importance and of more influence on the weal and woe of the farmer, than the sustenance of his domestic animals during the winter. It is indeed a matter of surprise, that industrious, money-and-time-saving as our farming community generally is, they but too often neglect to pay the necessary attention to the important subject just mentioned.

Protection against the inclemency of the weather is needed by beast as well as man, and whoever neglects to provide this is guilty of a shameful disregard of the duties he, as a man, owes to his dumb dependent, and to his own welfare and self-interest.

If those farmers, for instance, who suffer their SHEEP to be exposed to the rigor of the weather, were aware of the damage done thereby to the quality of their wool, and to the value of the animal, they would cheerfully perform the labor required to provide against such losses. Many are possessed of the foolish idea, that because SHEEP have a thick coat of wool, they need no shelter. But look at the torn-off and loose fleeces of such sheep in the ensuing spring, and experience will teach you, that you were sadly mistaken in your calculations. *Poor* in flesh and *poor* in wool, they will never do for the butcher, and shear on an average one-half less than they ought to.

It is an old but true saying, that "A want of comfort is always a want of flesh." Therefore provide good stables, sheds and shelter for all your cattle, horses and swine. They will remunerate you at the proper time for the attentions bestowed upon them. If you have an abundance of straw, or if your barns or sheds are in a poor condition, you can make cheap shelters in an easy and expeditious way by building pens of large poles or rails, enclosing a space about one foot wide, and covering the top as well as filling the space at the sides with straw.

This kind of cheap shelter will serve for every kind of stock.

Shelter being provided, another actual condition for the welfare of your stock during the winter, is to have them sufficiently provided with food. If this should not be the case, you better sell a part of your stock, even if it were at a reduced price, and reserve your food for the rest.

Save your fodder in the best way you can, and have your hay well cut, and, if possible, sprinkled with brine, unless it has been moderately salted when put into the barn. Feed well, but economically.

Keep your stock well provided with pure clear water at all times of the winter season. If you can avoid it, don't suffer them to walk through the mud to obtain their drink, but keep it ready for them in your barn-yard. In many cases, where this is not done, cattle and sheep will get their feet frozen, and hoof and foot ail will be the natural consequence of it.

"The eye of the master makes the horse grow fat." If you would have your live stock flourish in winter, let it have your own careful supervision daily; separate the weak from the strong, and those which are too young to have attained full strength, from those which have already arrived at maturity. If you have a vicious, ill-natured animal, sell it, if you can, at any reasonable price; otherwise it will make as much mischief in your barn-yard as a quarrelsome, malicious inmate in your family.

Begin to feed out a little hay or grain early, so that your stock may come into winter quarters in good condition. If you do this, you will find that "well-summered" will be "half-wintered." Shelter them carefully from the storm, make eave-troughs to carry the water from the roofs of the barns and sheds, so as to keep the barn-yard dry, give the stock abundance of clean dry bedding, if you can, feed them well (not over-feeding them at one time and starving them at another,) and let them have free access to good water at all times. Let "waste not, want not, spare not," be your motto, and your success is reasonably certain.—*The Wool-Grower.*

MASSACHUSETTS BOARD OF AGRICULTURE.

This Association met at the State House, on Wednesday, the 14th inst., and was called to order by MARSHALL P. WILDER, its President. SIMON BROWN, editor of the *New England Farmer*, was elected as Secretary pro tem. With one or two exceptions every county society in the State was represented.

The first business of the meeting after its organization, was to hear reports from the delegates appointed to visit the Exhibitions of the different Agricultural Societies in the State which took place during the past autumn.

The President, M. P. WILDER, reported upon the Hampshire Society; Mr. DODGE, upon the Hampshire, Hampden and Franklin; Mr. PROCTOR, the Worcester; Mr. LATHROP, the Essex; Mr. FRENCH, the Berkshire; Dr. GARDNER, the Franklin; Mr. PROCTOR made a verbal report of the Bristol Show, speaking of it in very complimentary terms, and among other things, stated that a complete apparatus for capturing and storing the whale was on exhibition, and was the object of much interest. It was then voted that Mr. PAGE be requested to prepare a report of the Norfolk society; Mr. KING, of the Worcester West; Mr. FOWLER, of the Hampden; Mr. WINTHROP, of the Middlesex; Dr. REED, of the Housatonic, and Mr. BROOKS, of the Barnstable Society.

Mr. CUSHMAN reported a Constitution and code of By-Laws, which were amended so far as to declare that the name of the Association shall hereafter be THE MASSACHUSETTS BOARD OF AGRICULTURE, instead of the Central Board as heretofore.

The select committees to whom were assigned specific subjects at the meeting of the Board on the

3d September last, were now called upon to report; and, upon motion, the report of the President upon *Agricultural Education* was ordered to a first reading. Mr. DODGE then reported briefly upon the subject of *Milch Cows*, and asked for further time, which was granted. Mr. LATHROP (by Mr. GORHAM) reported on *Farm Stock*.

The President was requested to nominate five persons to act as an Executive Committee.

A vote was then taken that when the meeting finally adjourn, it adjourn to meet at the place of the present sitting, on the first Tuesday (the 3d) of February next. Adjourned till 3 o'clock.

AFTERNOON SESSION.

The Board re-assembled at three o'clock.

The announcement of the death of Hon. GEORGE DENNY was made to the Board, whereupon ALLEN W. DODGE offered the following resolutions:

The Massachusetts Board of Agriculture having learned the death of Hon. GEORGE DENNY, recently associated with them in the prosecution of the objects of the Board, therefore

Resolved, That this Board have learned with deep regret the decease of their late efficient and intelligent co-laborer, the Hon. GEORGE DENNY, of Westboro.

Resolved, That whilst we bow with submission to the Divine will, that has removed from the scene of his earthly labors one whose life was so useful, we cherish with profound respect the memory of his valuable services in the cause of progressive agriculture.

Resolved, That a copy of these resolves be forwarded to the family of our departed co-laborer, and we tender to them our sincere sympathies.

Reports from special committees were again read.

Mr. BROWN reported on Farm Implements; Mr. LINCOLN, on Root Crops; Mr. DAGGETT, briefly on Farms, and granted time to report further.

Prof. FOWLER submitted the following resolution:

Resolved, That the President of the Massachusetts Board of Agriculture be requested to enter into a correspondence with the Presidents of the several State societies and of other agricultural associations, on the subject of the expediency of calling a national convention for the purpose of taking into consideration the interests of agriculture in the United States.

It was discussed and unanimously adopted.

The President then nominated for the Executive Committee of the Board the following named gentlemen:—EDWARD EVERETT, JOHN W. PROCTOR, J. H. W. PAGE, B. V. FRENCH and Professor FOWLER, who were unanimously elected.

A second reading of Mr. WILDER's report on *Agricultural Education* was called for, read and discussed at considerable length. Mr. CUSHMAN then offered the following:—

Resolved, That the report of the Committee on *Agricultural Education* be referred to the Executive Committee of this Board, with instructions to present the same to the Legislature in behalf of

this Board, and urge the passage of such laws as may be necessary to carry out the principles and views contained in said report.

The report intimates the establishment of a State Department of Agriculture—having for its officers gentlemen peculiarly fitted for this new branch of Education, suggests that a portion of the proceeds of the sales of the public lands may be applied to promote agricultural science, and to bestow upon this mother of all the Arts the same fostering care that has been bestowed upon the other interests of the Commonwealth. The resolution above was unanimously adopted.

The subject of *Agricultural Education* demands an open, full and free discussion, and undoubtedly will receive it in some of the agricultural meetings at the State House. It will only be by a candid comparison of opinions that the true course of action can be ascertained. There will be, of course, opposing views, but they must be met on all sides with a spirit of kindness and forbearance, and out of them will be evolved a beautiful structure which shall shed its healthful influences over every part of the Commonwealth.

The meeting throughout seemed animated with a common desire to promote the interests of agricultural industry, without being wedded to any particular plan as to how it should be done, provided it accomplish the object proposed. And after a long and laborious session in which the kindest feelings of the heart prevailed, and marred only by the startling intelligence of the death of a beloved brother, the meeting adjourned to the first Tuesday (the 3d day) of February next, at 10 o'clock in the morning.

For the New England Farmer.

CRANBERRIES.

BY L. A. SHURTLEFF.

The subject of cranberries seems at this time to be under investigation. I propose to cast in my experience as testimony. Having in several communications expressed my views as to wet and clay meadows, I now must inform you and your interested readers that from close observation I have fully made up my mind that the same varieties of fruit grow on high, sandy land, that grow in bog meadows; and that all pretensions that have been made to the contrary are *quackery*. I have the same kind and quality growing side by side, only two rods apart; one on a miry bog, and the other on a dry, worn out and sandy field. I have on my farm two distinct kinds, one oval and the other round. The latter kind grow only on one meadow, and are called 'the English variety'; they are not so large, but much richer in flavor, and keep longer. I always choose them for my own table. I think I never saw them any where but in this meadow. Three years since I ditched the meadow, spreading the mud on the surface. Since then the fruit is large, shape of a R. I. Greening apple, and quite prolific. I am again obliged to say, that meadows that are kept dry by draining are less injured by frost, and produce an hundred bushels where they formerly did not produce ten.

After having tried it several years, I think that the drier the meadows are, the more sure will be the crop of cranberries. A loam above mine where the owner got formerly only five bushels, now yields over a hundred. I think gravel, sand, loam or muck, spread on meadows, will do the vines great service. Where old vines need renewing, it can be done by top dressing; it covers up the old dead vines, and new shoots come up and bear plentifully.

If vines are wanted, they can be had at a moderate price, delivered in Boston or elsewhere, either from sandy land or bog meadows.

Yours most truly,
Spring Grove, Jan. 10, 1852

L. A. S.

REMARKS. — Dr. SHURTLEFF has given considerable attention to the subject upon which he writes above, and his opinions upon it are valuable to those who wish to make experiments in the cultivation of cranberries on upland. It will be observed that he controverts the opinion that to raise the cranberry successfully, the meadow must be flowed. The truth of this can only be established by a comparison of results in many different locations; and to this end we invite communications from our friends on this subject.

A UNIVERSITY

FOR THE PROFESSIONAL EDUCATION OF FARMERS AND MECHANICS.

Why, then, attempt to extinguish forever the light of this invaluable science? It has wronged no human being; it asks only an equal chance with medical science as supported at the public expense, in the cities of New York, Albany, and Buffalo. We have never objected to the professional education of doctors, lawyers, and military officers, at institutions adapted specially to the purpose. So far from that we claim that this practice is founded in sound public policy, and that our industrial professions equally deserve the aid of science and special institutions, where the young farmer can dissect all the animals which he is expected to breed and rear, and thereby learn the form and function of every organ, whether it digests food, elaborates milk, fat, flesh, bone or wool. The improvement of domestic animals is a great desideratum, and involves much anatomical and physiological research. So long as hundreds of young stock-growers and dairy-men earnestly seek to extend their professional knowledge in this direction, to benefit themselves and the community at large, it is both mean and disgraceful in the Legislature to deny them the benefit of one agricultural school in a State that contains a half million of farmers.

Young friends, send in your petitions early, and write often to your representatives on this subject. Let them know that you are in earnest in the matter.

MILLARD FILLMORE once carded wool and fulled cloth as an honest apprentice should. Suppose he had stuck to his trade to this time! What chance would he then have had of being now President of the United States? We tell you frankly, that any system of education which compels an ambitious youth to leave the shop of the mechanic and the

fields of the farmer to graduate in a lawyer's office, before he can rise under our republican form of government, is radically defective. Professional men now enjoy an amount of intellectual training and discipline which are invaluable to them, but denied to practical farmers and mechanics. If our reasoning faculties be not fully developed, it is the decree of a good Providence that we shall be forever looking up to men who are looking down upon us. — *Gen. Farmer.*

For the New England Farmer.

SUCCESSFUL INDUSTRY.

SIR: — I send you a few extracts from a letter addressed to me recently from one of our New Hampshire practical farmers, and who but a few years since was a laborer for me upon the banks of the Connecticut in the character of a "hired man." He is now the owner and worker of a farm of his own.

Yours, &c. H. H. S.

Washington City, January, 1852.

Lime, Dec. 15, 1851.

DEAR SIR:

I have hired a great variety of laborers, and some that I could recommend as very good, but never more than one or two who could be trusted as you trusted me.

Our laboring people lack in many instances intelligence, and an ignorant laborer can never be as useful to his employer as the better informed.

Others again are destitute of an honest purpose and cannot be trusted. Some are wanting in energy, some in physical powers, and many in a certain tact or slight of hand that men in all occupations must obtain in order to perform the most labor at the least expense.

Most of our farmers lack method. They are not taught it either by principle or example. "There is no business pursued in such a blind, helter skelter fashion as farming." Ask a farmer what it costs him to fatten his hogs, to keep his sheep, or cattle, or raise his crops; and not one in a thousand can tell: — with regard to many of them I could not tell myself.

And then the best mode of cultivating the earth — of plowing and manuring and the rotation of crops, there is no settled method, but every man does that which is right in his own eyes, as the Jews did when "there was no King in Israel." Some hit it right, but all fail occasionally. Let a man undertake to perform any other business in such a guess-work manner and ten chances to one he would fail — and the farmers would most of them fail, if farming were not the safest business performed.

You wish me to write you at what price you could obtain leached ashes. I am not able to say. We have no manufacturers of Potash in this town, and I think there are none in the adjoining town. They have all stopped for two reasons. Our farmers by repairing their houses and using stoves instead of the old fashioned fire-places, consume less wood, and many of them have found out ashes come from the soil and that it is good economy to return them again. But I have no doubt you can get them in the vicinity of the rail-road not far to the north, for as a townsman sometimes says, "the fools are not all dead yet."

Yours truly,

S. F. J.

EASTHAM.

According to Pratt's History of Eastham, just published, this is the only town in Barnstable county that raises grain sufficient for its own consumption. More than a thousand bushels of corn are sent to market.

There is a pear tree, now standing on the farm, formerly of Governor Prince, near the spot where his house stood, which was planted by himself—probably two hundred years ago. Mr. Prince was first elected governor of the colony in 1634.

In 1651, it was ordered by the Colony Court, that if any lazy, slothful, or profane persons, neglect to come to the public worship of God, they shall forfeit for every default, ten shillings, or be publicly whipped.

In 1652, the town ordered that the constable have power to collect the fines on persons, who were negligent in coming to town meetings, on information being given by the town clerk; the constable to have one half, the town the other.

In 1662, the town agreed that a part of every whale cast on shore be appropriated for the support of the ministry.

In 1664, it was agreed between Mr. Samuel Freeman and the town, that he should pay the rate, for which the town was prosecuted by the Court, as their part of the expenses of the government, one half in money, and the other in peas and wheat; and for so doing, he should have a black horse running at large at Pamet, it being the town's property; and that he also should serve as a trooper for the town three years.

In 1665, the town voted that all the horses belonging to the inhabitants should be marked on the fore shoulder with the letter E, to distinguish them from those which belonged to the inhabitants of other towns, they having a different mark.

It was also voted by the town, that all persons who should stand out of the meeting-house, during the time of divine service, should be set in the stocks.

In 1672, the town voted that every house-keeper should kill twelve blackbirds, or three crows, which did great damage to the corn; and this vote was repeated for many years.

PREDOMINANCE OF WATER

IN THE COMPOSITION OF VEGETABLES AND ANIMALS.

Potatoes contain 75 per cent. of water (by weight,) and turnips no less than 90 per cent., which explains, by the way, the small inclination of turnip-fed cattle and sheep for drink. A beef steak, strongly pressed between blotting-paper, yields nearly four-fifths of its weight of water. Of the human frame (bones included) only about one-fourth is solid matter (chiefly carbon and nitrogen,) the rest is water. If a man weighing ten stone were squeezed flat under a hydraulic press, seven and a half stone would run out, and only two and a half stone of dry residue would remain. A man is, therefore, chemically speaking, forty-five pounds of carbon and nitrogen diffused through five and a half pailfuls of water. Berzelius, indeed, in recording the fact, justly remarks, that "the living organism is to be regarded as a mass diffused in water;" and Dalton, by a series of experiments tried on his own person, found that of food with which we daily repair this water-built fabric, five-sixths are also water. Thus amply does sci-

ence confirm the popular saying, that water is the "first necessary of life."—*Quarterly Review.*

SECOND AGRICULTURAL MEETING,

AT THE STATE HOUSE, JAN. 20, 1852.

SUBJECT FOR DISCUSSION—*The best mode of advancing the interests of the farmer.*

The second Agricultural meeting of the present series was held on Tuesday evening,—H. W. CUSHMAN in the Chair.

The Executive Committee, to whom was assigned the duty of preparing rules for the future government of the meetings, and a list of subjects to be discussed, reported through JOHN W. PROCTOR, of Danvers, as follows:—

Rules and Regulations for the Legislative Agricultural Meetings.

1. A permanent Secretary shall be appointed, to observe and keep a record of the doings of the meetings.
2. The Executive Committee shall select subjects for discussion, and shall procure persons to preside at the several meetings; and the gentleman who is to preside, and the subject for discussion, shall be announced at a previous meeting, when practicable.
3. These meetings shall be limited to twelve—and no gentleman shall occupy more than *fifteen minutes* time, except the presiding officer—who shall not occupy more than *thirty minutes* time.
4. The Editors of Agricultural and other papers are invited to make reports of the doings of these meetings, and to publish the same in their respective papers.
5. All gentlemen interested in the subjects discussed at these meetings, are invited to attend and take part in the discussions.
6. The time of opening these meetings shall be a quarter past seven o'clock, P. M., and the time of closing shall be nine o'clock, until otherwise ordered.
7. The Committee propose Mr. STEPHEN N. STOCKWELL, as permanent Secretary.

Subjects for Discussion.

1. The best mode of advancing the interests of the farmer.
2. Plowing, and kindred operations.
3. Manures.
4. Farm stock.
5. Grasses and grain crops.
6. Cultivation and preservation of fruit.
7. Draining, and the improvement of meadow and swamp land.
8. Sub-division of lands and fencing.

The report was unanimously accepted.

The Chairman then announced the meeting as being open for remarks upon the subject assigned for discussion. Mr. PROCTOR rose and said, that the question proposed includes the whole subject of farming in its broadest sense. It had seemed to him that the best mode of advancing the interests of the farmer, is, in the first place, to prepare the young farmer for his task; to instruct him properly in what he is to do. And how shall this be done? Shall it be done by setting him at work upon the land without direction; to learn what his fathers have learned by their own experience; or by placing him in a situation where he can reap the benefit of the experiments made by those who have gone before him? The task of the farmer is one of the most difficult to learn; one of the most comprehensive, of all employments. Before the young farmer can go upon his land and proceed to work it correctly, he must understand the elements of the soil he has to work upon, its characteristics and peculiarities; what it is fitted to pro-

duce, and how it may be made to produce abundantly. These elements are different in different parts of our commonwealth. There has been in years past an entire want of preparation of young farmers for the task they are to pursue. Much has been said in this connection about extending Agricultural education by establishing schools and colleges, and model farms, all of which might be made useful. But it had seemed to him that it would be well to begin to introduce in the early education of farmers' sons in our common schools, those elements of agricultural knowledge which are common to all. He knew not why practical books adapted to the young, forming the first principles of an agricultural education, such as the characteristics of soils, the principles of geology, &c., might not be introduced into our common schools, and studied with as much propriety as grammar, or arithmetic, or any of the other branches. It had seemed strange to him that while the Legislature had provided the means for preparing the teachers in our schools to undergo an examination in all other branches, it had never occurred to that body that they should be required to teach this.

Dr. GARDNER, of Seekonk, was next introduced. The subject was one upon which he had bestowed much thought, and he would suggest in regard to it, *first*—that the best mode of advancing the interests of the farmer would be to equalize the taxation of the Commonwealth; so that the farmers should not be taxed any more in proportion than any other classes. All property should bear its due proportion of the burden of taxation. The greater proportion of the agricultural community are land owners, and land being a description of property always accessible to the assessor, it is generally fully taxed, while a large amount of property invested in stocks, banks, &c., is not taxed at all. Hence an unequal share of the burden of taxation comes upon the farmers. This he would equalize; and on our tariff systems he would have no discriminations which would militate against the farmers. *Secondly*, he would preserve as far as possible the freedom of the country, because wherever there is not freedom, agriculture can do nothing—it will die. It cannot flourish in a slave, as in a free country. This point he illustrated and enforced by comparing the States of Ohio and Kentucky; showing that the former, a free State, had increased in proportion as fast again as the latter—a slave State. *Thirdly*, he would see to it that the population of the State was educated, because he believed that, after all, more depends upon the brain than upon the muscle. As to the best mode of education, there was a difference of opinion. He believed it to be important to educate the whole population, and should therefore go for introducing the study of agriculture into all our primary schools, and would also make it obligatory

to have an agricultural department in all the Colleges of the State. It is important that agricultural chemistry should be better understood, and its first elements might be taught in the common schools as well as the first elements of Physiology. He had no objection to immediately establishing an agricultural College, as some proposed, if that is upon the whole deemed most desirable; but he should prefer, if it is to be established, that it should teach other branches as well as those relating entirely to agriculture, in order that the farmers' sons who desired to do so, might learn other sciences—simultaneously with that of agriculture.

Mr. SETH SPRAGUE, of Duxbury, was next introduced, and spoke from his own experience of the want of a more extended knowledge of their calling, among farmers. Give our farmers the knowledge they need and he thought that even with our barren, rugged soil, they could compete successfully with the farmers of the fertile West. Our farmers need to bring in skill and science to enable them to get fair a profit for their work. The great question is, how shall we best disseminate agricultural knowledge. We have the requisite industry and every thing to apply, but we lack in the requisite skill to apply it. He was satisfied that if farmers understood their business thoroughly, our farms might be made so productive as not only to pay for the labor bestowed upon them, but to yield also a return for the capital invested. The speaker then alluded to the different projects of agricultural schools, a Board of Agriculture, &c.—and thought that something might be done through our common schools, if the proper books could be obtained; but where, he asked, is the man who can make a suitable book for this purpose? We must, however, make a beginning, and the community must be thoroughly taught in the first great principles upon which agriculture is founded. He closed by expressing the wish to see the interests of the farming community promoted by a wide diffusion of knowledge among its members.

Mr. SHELDON, of Wilmington, next spoke. He thought that if farming was to become a branch of education, it must be taught in our public schools. He was opposed to an agricultural college, because he believed it would be the means of increasing rich farmers—that they would learn too much, and not so many would get their living by it, as do now. No young man can do anything in manufacturing now, with a capital of \$200 or \$300, because it is carried on by corporations and heavy capitalists. He was afraid if they got up an agricultural college the next thing would be corporations for carrying on farming. The more the farmer learns in regard to his business, the more he believed he would still see before him that ought to be learned. New fields for study would be continually opening before him. He was satis-

fed that farming was the most profitable of all employments.

Mr. FRENCH, of Exeter, N. H., one of the associate editors of the *New England Farmer*, was invited by the President to address the meeting. He said he came to learn, rather than to teach, and he thought his time thus far well spent. Alluding to the sentiment expressed in the late Governor's message, that a community would always succeed best which has the most intelligent population, he said that this intelligence, and knowledge, and light, is what is wanted by the farming community; it is what is needed in the dark corners of New Hampshire. The great question is, how shall they get this light? One man in New Hampshire produces a pair of oxen and sells them for \$150, while his neighbor has another pair of a similar age and sells them for \$60 or \$70. Why is this so? It is because some men are better educated for their rank than others. How shall we make the rest of the community understand this knowledge and apply it? The farmers of New Hampshire looked to Massachusetts to solve this question—to take the lead in diffusing this intelligence, but they had looked thus far in vain;—and he would say that unless Massachusetts moves nimbly, she will have to follow New Hampshire rather than lead her. The sentiment in New Hampshire is that teaching agriculture in the common schools, or in academies, is not enough, nor is it sufficient to give it a department in a college. It must be something more—a separate, independent system to promote agriculture. The farmer's son might be carried along in the common school through all the usual branches of study, until fifteen or sixteen years of age, and after that time a specific education for his business might be given. But this agricultural department in a college would not do. It would not be deemed a respectable department and it would not be respected. There must be an independent system—and with it a model farm—where can be shown the best farming, with the best implements; the best stock managed in the best manner; and in a way that will pay; where all agricultural knowledge can centre; where facts can be collected, compared and published. He was not in favor of an extravagant outlay for this purpose. Twenty thousand dollars would establish a model farm in each county. Neither would he have it burdened with an over supply of science. He would rather have it managed by practical men, and rely upon the professors of our colleges for scientific lectures and experiments when they were required. This kind of science he would buy and pay well for it. When soil was to be analyzed he would send it to the State assayer, and learn from him what properties it needed, and then the practical farmer could apply them. He hoped the work of extending this knowledge by means of such institutions might be

effected in Massachusetts, in order that the good effects of it might extend to New Hampshire and encourage the farmers of that State in securing the same result.

Mr. JONES, of Wayland coincided with the previous speakers in their views upon the importance of extending the knowledge of the farmer.

Mr. WALKER spoke in favor of educating the *laborer*—the man who actually does the work upon the land, and thought that anything short of this would fail of accomplishing much good. It would not suffice to educate a few rich farmers. In this and every free country every farmer must work. He must be qualified to carry on his own business and to have his work done under his own supervision to have it profitable. *Fancy farmers*, of whom there had been an increase of late years, could not do this. He regarded farming as a profitable business—it was not a great money-making business, like trade, commerce and manufactures. Still, if we take all things into consideration, it is as profitable as any other branch of business.

Mr. PUTNAM, of Roxbury, was the last speaker, and dwelt upon the importance of educating the sons of farmers to observe those laws of nature, upon which their calling is to so great a degree dependent. His own idea was, that there are few who are competent to teach all that is desirable—and yet a great deal of knowledge exists in the community. We want some spot where it can be got together. Some 50 or 100 men to go round to the various towns as teachers, might disseminate much knowledge. We must have some such place to prepare them. He did not wish a class to be educated to be above work. It would be dangerous to our liberties. The freedom of every country might be measured by the condition of the *actual* tillers of the soil. Let them be intelligent but hard working. He closed with the repetition of the thought with which he commenced—that we want farmers to be educated so as to be disposed and able to observe the laws of nature, in conformity with which they must work, if they expect success.

The subject for the next meeting was announced as "*Plowing and kindred operations*," and the meeting then adjourned.

For the *New England Farmer*.

BLUE FLAG.

MR. EDITOR:—I wish to ascertain through you, or some of your correspondents, whether there is any way to kill out the blue flag, from our meadows, other than digging it out by the roots.

Yours, T. O. J.

Plymouth, Dec., 1851.

THANKS.—Our thanks are due to many of our contemporaries, for generous and friendly notices of the *New England Farmer*. These courtesies will be remembered with gratitude, and reciprocated when occasion offers.

THE WINTERING OF STOCK

There are three facts connected with the wintering of stock which should be well considered by every one who keeps a cow, horse, pig, or sheep.

1. It is a fact that the production of animal heat in the body consumes more than half of the food taken into the stomach.

2. It is a fact that external warmth serves as an equivalent of food to an extent which is of great importance.

3. It is a fact that the aliment daily taken into the systems of all animals, should be precisely adapted, by its chemical composition and solubility, to the natural wants of every organ and tissue in the living being.

To the above, we might add other truisms in the keeping of domestic animals, did not long experience admonish us that a few facts, clearly, stated, are more useful to a majority of readers than any attempt to express in one article all that ought to be said on any important topic in husbandry. It may be asked how we know that more than a moiety of food eaten by a horse, or sheep, goes to create animal heat! This is our answer to that question: By the analysis of hay, oats, corn and corn stalks, and other food of stock, we learn the amount of carbon, (coal,) oxygen, hydrogen and nitrogen, that 100 lbs. contain. It is known that sensible heat is always generated when carbon, in vegetable substances, (of which wood and coal are familiar examples,) combines chemically with oxygen, as in combustion. Now, nearly two-thirds of the carbon taken into the stomach in forage, roots or grain, passes out of the wind-pipe, in combination with oxygen, (vital air,) as carbonic acid. It is just as impossible to burn 20 lbs. of hay in the system of a horse or cow, and not have it evolve heat, as it would be to burn the same hay in a stove without so much as either warming the fuel or the stove. There is really no more mystery about the production of animal heat through the agency of respiration and digestion than there is about the heat in a steam boiler; but the needless waste of animal heat, and of the fuel that generates it, in the six coldest months in the year, in this country, amounts to a loss of many millions. To prevent this loss, is the main object of our present writing. It can be done by providing warm and comfortable stables, houses and sheds, for all kinds of stock, including poultry and honey-bees. By ceiling stables in wooden barns inside with rough boards, and filling the space between the outside boards and the ceiling with dry tanbark or dry horse dung, we have made them sufficiently warm, so that no manure would freeze in them except in extremely cold weather. In basement stables, surrounded by thick walls laid in mortar, and covered by a floor and hay and grain, a word of caution is necessary, not to forget due ventilation. A great many horses, cows and oxen, are injured by being kept in badly ventilated stalls and stables. Let it never be forgotten by persons sleeping in tight rooms, and by those that rear and keep domestic animals, that the air expelled from the lungs in breathing always contains one hundred times more carbonic acid gas than it did when it entered them. This poisonous gas should have a reasonable outlet from all stables, especially where many animals are kept in one apartment. Nothing but knowledge will enable a farmer to combine warmth and ventilation for the health and comfort of all that breathe, wheth-

er in his own dwelling, in stables, pig-styes, bee-hives or poultry houses. In this, as in all other matters, extremes are to be avoided.

In wisely selecting the food which is best adapted to the natural wants of neat-cattle, milch-kine, working teams, sheep, and poultry, we all have much to learn.

The value of cutting feed, such as straw, corn stalks, and hay, is a matter on which we all need more light. It is the general belief that it pays well for the labor; but it will pay to cut good hay, even for working cattle! If one has hired help, and nothing else for them to do while cutting hay, doubtless it will aid digestion to cut up the stems and leaves of forage plants. How to make flesh and fat to the best advantage, are points of some interest to those who keep animals and prepare them for the butcher. Our own observation leads to the conclusion that it is better economy to boil corn, peas, and barley, fattening hogs and cattle, without grinding, if one has to pay from 8 to 16 per cent. of the grain to the miller. Cooking food, like "homony," renders all its nutriment available, and grinding can do no more, and one loses the toll, whatever that may be. Nature maintains animal heat for chemical purposes, or to aid in transforming vegetable into animal tissues. Cooking food is a step in the same direction, for it effects important chemical changes in the substances cooked. How far hot water may be economically used in preparing forage, seeds, roots, tubers, apples and pumpkins, for the consumption of fattening cattle, must be decided by future experiments. Whatever feed domestic animals receive, it should always be given them at stated periods of the day—and all that is left should be promptly removed, that the animal be not allowed to breathe upon it and taint it with the foul exhalations from the body. One of the most common errors in wintering stock, is the notion that they should not gain as much in weight when kept up, or fed in a yard, as when running in a good pasture in summer and autumn. Every day that a pig, heifer, steer, lamb or colt, lives without growing, involves the owner in expense, and probable loss. The art of stunting young animals is more practised than studied; and the principles of making Shetland ponies, and such wee-bits oxen, cows and hogs, as one meets with in some States, ought to be known to all. Nature kindly contracts the body to meet the limited supply of food, by bringing the system prematurely to ripeness, till some of the adult horses weigh considerably less than the largest sheep. To add weight in muscle and fat, over and above the daily loss by necessary absorption, the keeper of young animals must give them more than barely enough to maintain life; and yet this is the rule of many a farmer in wintering his stock—hogs, cattle and sheep. What an animal requires according to the weight of its body, to make good the wear and tear of ever-consuming life, in the hourly removal of the elements of bone, tendon, nerve, cellular and vascular tissue, fat, &c., are not known. When an adult animal neither gains nor loses weight, if we subtract from its food all that is voided by the bowels and kidneys, and in respiration, the excess is mostly appropriated to repair the waste in solids, which is constantly in progress. But the effete matter pass out of the system mingled with the residuum of food daily eaten, and we have no means of separating the carbon from the brain or muscles, in

the carbonic acid that escapes from the lungs, from the carbon in the blood derived directly from food.

Although we cannot say that such a per cent. of aliment goes to repair the bones, such a per cent. to make muscles or nerves, or fat; yet it is easy to determine by experiments, what kind of food, in what condition, and how much, one should feed to obtain the highest profit. As a general proposition, it may be truly said that about one-third more are kept than the food to keep them on will warrant. Life is supported, but meat is greatly decreased in quantity and value. The corn that will keep a hog six months without gaining a single pound in flesh, will make 75 lbs. of good pork or bacon if skilfully fed. The same rule applies to all domestic animals. Instead of using the daily feed of cows to elaborate milk or flesh, the system consumes it all to make the vapor and gases that escape from the wind-pipe, and the excreta from the skin, kidneys and intestines. In keeping dairy cows, and sheep, we have had occasion to investigate grass, hay, roots and corn, when eaten by these and other animals.—*Genn. Farmer.*

CHEAP ROOFS.

On a roof formed of light timber, nail on the boarding, consisting of half-inch boards, taking care to have the lumber well seasoned, and boards closely joined and firmly nailed. Over this spread a coat of tar, and sift on as much clear sand as can be made to adhere. Over this spread a second coat of tar, and sift on sand as before, and continue so to do—applying tar and sand till the coating is at least half an inch thick. It is very desirable, in order to secure greater compactness and solidity, to roll the sand carefully, and see that none of it is left loose on the surface. The more sand you can make adhere, the more durable will be the roof. It is also a good plan to apply a single coat of tar and sand every spring; but this is by no means indispensably necessary, as a coating half an inch thick, applied as above directed, will endure for many years; still it improves and freshens the appearance of the roof. It is sometimes considered necessary to cover the boards with a laying of common sheathing paper, well tarred, before applying the tar and sand; but this materially detracts from the cheapness of the roofing, and unless in certain anomalous cases, is of little practical utility in any point of view.

And now, while I am on this subject, permit me to suggest another valuable improvement in boarding the walls of farm buildings. It is customary to make the side walls of frame stables, barns, sheds, etc. etc., close by boarding and clapboarding, and sometimes by shingling. This is always expensive. Now, if the boards are three-fourths of an inch thick, and well planed, and secured to horizontal ribs, instead of studding placed vertically, or up and down, so that the boarding will be vertical, or perpendicular—and if between every two boards, which should be of uniform width as well as thickness, there be left a space of an inch, and the whole be painted, four inch strips, of one-half an inch thickness, well painted on both sides before being put on, will be all that is required to cover these inch spaces, and make a closer wall and a much more elegant and tasty finish, than can ever be given with clapboards, and at less than one-tenth the expense. I have seen large barns finished in this way, also extensive stores, and farm houses,

as well as smaller and more unimportant structures. Any kind of cheap lumber will answer for this kind of walling, provided it be sound, and well painted and nailed. It is of the utmost importance to have the whole well painted, as the *battening* would, if left unprotected, be likely to warp, and thus frustrate the design.—*Germantown Telegraph.*

NOVEL MILK ARRANGEMENT.—The *N. O. Picayune* gives the following account of a milkman's establishment in that city which does away with cows and pumps both. It says:

"His cows are goats. He may be seen almost any morning in the first or third municipality, slowly stepping ahead of his little flock; the rough-looking but tractable animals following in single file, and now nibbling at the tufts of grass that spring up along the sides of old houses, now answering by a plaintive bleat to a low word from their guide. The whole group stops before some door way; a grinning negro servant appearing, the man receives from him and fills at once with pure milk from the natural fountain a small tin measure, returns it, pockets his shining recompense, and again moves on in a grave, silent and impassible manner. There is evidently a kindly feeling between the milker and milkees. The same quiet, composed look pervades the whole group.—This humble and peaceful industry may make its pursuer as happy and contented as the proudest or wealthiest of his neighbors."

¶ We find in the *Granite Farmer* the following description of several animal curiosities, exhibited at the recent N. H. State Fair.

There was one singular looking animal, said to be a S. Amer. sheep, having four horns, and wool more than a foot in length, which, it was said, had not been sheared for seven or eight years. It seemed very unwieldy and hardly able to move under its load of clothing. While speaking of curiosities we would call to mind a Devon heifer, exhibited by Isaac Fox, of Nashville, in the top of whose fore shoulders was a singular growth closely resembling the two fore legs of a miniature cow. The animal's horns turned down in front, and it was very prettily ornamented, so that it attracted much attention.

VINEGAR FROM BEETS.—Good vinegar is an almost indispensable article in every family, many of which purchase it at a considerable annual expense; while some use but a very indifferent article; and others, for want of a little knowledge and less industry, go without. It is an easy matter, however, to be at all times supplied with good vinegar, and that too without much expense. The juice of one bushel of sugar beets, worth twenty-five cents, and which any farmer can raise without cost, will make from five to six gallons of vinegar, equal to the best made of cider or wine. Grate the beets, having first washed them, and express the juice in a cheese-press, or in many other ways which a little ingenuity can suggest, and put the liquor into an empty barrel; cover the bung-hole with gauze and set it in the sun, and in 12 or 15 days it will be ready for use.—*Farmer & Mechanic.*

¶ One of the most agreeable visions the publisher of a newspaper could have, would be that of his accounts all squared at the end of each year.

MOTHER APPLE.

In the *Farmer* for September, 1850, we noticed this apple, having then some samples of it before us, sent in by Mr. J. C. STONZ, of Shrewsbury, in this State. Those samples were very large and fair; and the fruit promises to be one of the finest late fall apples.

In his excellent practical treatise upon the management of apple trees, Mr. JACQUES, of Worcester, describes the Mother Apple, as being large, one of the best, good for cooking or the dessert, and in season from October to January.

The Mother apple is a productive Worcester County seedling, but has not been in use long enough to have earned a well-established reputation.


GREAT CROP OF GRASS.—MR. CLAPP, of Greenfield, in remarking on the Plow, at the late meeting of the Mass. Board of Agriculture, said that he had cut *four* tons of hay to the acre after common plowing, and *six* tons after sub-soiling, in both cases, mowing twice in the season. The land manured and treated in the same manner in both instances with the exception of sub-soiling. Deep plowing is gaining many new advocates. It is found to be one of those excellent rules that works well both ways, either in a wet or dry season. If too dry, the roots seek moisture in the earth loosened by the sub-soil plow—if too wet, the water settles into it leaving the roots to seek supplies as they are needed.

MORALS AT CATTLE SHOWS.

During the interesting discussions which took place at the meeting of the Massachusetts Board of Agriculture on Wednesday at the State House, Col. PAGE, of Bristol, remarked that he passed three days during the autumn in attendance upon agricultural exhibitions. That in those three days he probably mingled with 30,000 persons, yet saw no one intoxicated, heard no angry word or indelicate expression, and at no moment during the time found himself in a situation where he would be unwilling for his wife to be upon his arm!

Col. PAGE is an accurate observer of manners and men, and as his observation accords very nearly with our own during several days spent at the Shows, we cannot but believe that the Festivals of the Farmer have been in a great measure exempt from the vices which are usually noticed in most large gatherings. That the tendencies of agricultural pursuits are to virtuous lives is plain, and if any thing were wanted, this offers another inducement for more persons to engage in them.

HAMILTON COLLEGE.—Through the politeness of Professor EDWARD NORTH, we have received a Catalogue of the Corporation, Officers and Students of Hamilton College, at Clinton, N. Y. It is illustrated by a beautiful engraving of the buildings of the institution, and the letter press is as handsome a specimen of the art as we have ever seen.

 We welcome to the corps editorial *Agricultural*, SANFORD HOWARD, Esq., who is announced as "resident editor" of the *Boston Cultivator*. Mr. Howard has been well known to the agricultural world, having for several years been connected with the *Albany Cultivator*, one of the leading agricultural papers of the country. He is a good writer, has an extensive knowledge of agricultural subjects in general, and particularly of all matters pertaining to Live Stock.

And what gives our new neighbor an additional interest in our eyes, is the fact that we notice in the *Scientific American* a design of a Farm Cottage which was presented by Mrs. Sanford Howard to the N. Y. State Agricultural Society, and is published in their Transactions. Thrice happy is the Editor who has such a helpmeet in his editorial labors. Brother Howard, here is our hand—welcome to the Athens of America.

CARROTS FOR HORSES.—We have repeatedly urged upon the reader the importance of using carrots once a day as feed for the horse. For young horses, especially, corn or meal is too stimulating, and has a tendency to bring on disease and premature decay, while carrots are succulent and nutritious, and tend to keep the digestive organs in order, and consequently the whole system vigorous and capable of great endurance.

UNION ARTIST: Pittsburg, Pa., R. D. HARTSHORN, Editor.—We spoke of this work upon receiving the first number. Its character is fully sustained in the third. Please send us the second number.

Horticultural.

NEW DISCOVERY.

The following is an extract from a late letter of the Paris correspondent of the *St. Louis Republican*. If true, it is certainly wonderful. But deeper researches into the arcana of science will constantly reveal things not only untold, but entirely unthought of before. We stand as yet only upon the threshold of the vast store-house of knowledge before us; we have the key in our hands, and it becomes each one to advance and explore the bright and beautiful realms beyond. We can neither deny nor affirm the truthfulness of this account, but after all it is no more strange than that we sit in our chair and converse with a friend in New Orleans, receiving his reply to our question in a few minutes! The distance being only some fifteen hundred miles!—*Ed. Farmer.*

"And now let me tell you about a most beautiful and interesting discovery which has lately been made by a celebrated Parisian horticulturist by the name of Hebert. I was persuaded to go to his rooms a few days since, and I assure you I had no reason to regret the long walk I had taken.

Beneath a large glass case, four or five feet in height, and as many in circumference, were placed pots of roses, japonicas, pinks, dahlias, chinasters, &c., &c., all in bud. By means of a certain gas, invented by himself, and which is made to pass by a gutta percha tube to any pot required, Mr. Hebert causes the instantaneous blooming of the flowers. The ladies in the room asked successively for roses, dahlias and japonicas, and saw them burst into full bloom and beauty, in a second. It was really wonderful. Mr. Hebert is now trying to improve on his discovery, and to make the gas more portable and its application less visible. The secret is, of course, his, and his rooms are crowded every day with the most delighted spectators. I wish I could send you the lovely camilla which I received, which, when asked for, was so tightly enveloped in the green leaves of its calyx, that the color of its flower could not even be guessed at; and yet the request was hardly out of my lips when the beautiful white camilla was in my hand. When he has made a little more progress, Mr. Hebert intends to get out a patent and deliver his discovery to the public."

GREEN-HOUSES IN WINTER.

Very few persons appear to know the value of the sponge in a green-house. I mean for the purpose of washing the leaves of all those plants with leaves broad enough to admit of it. I took the hint some five years ago from a neighbor, the most successful plant grower I have ever had the good fortune to know. His plants were always so especially fresh and healthy, that I was for a long time puzzled to understand his secret, and he always declared he had no secret. But early one morning I caught him with a pail of clean water, slightly warm, by his side, sponging off the leaves of all his choice plants. I said to myself, "I have it." I did more; I went home and practiced it. My plants soon showed by their new aspect, that I was not wrong in believing it the real secret of my neighbor's success. They began to look brighter, healthier, and grow and bloom better than my utmost care had ever been able to make them do before. And now strangers always ask the same question when they see my plants, that I used to ask my neighbor. My answer is, "use the sponge." The pores of the leaf get filled with fine dust—and the plant chokes. Syringing does not wholly remove it; the sponge does.—*Horticulturist.*

THE WHORTLEBERRY.—The swamp kind is susceptible of easy and profitable cultivation in gardens. A gentleman residing in Wayne County, Michigan, has a tree growing in his garden which is ten feet high, and which was transplanted from a marsh about ten years since. It occupies, at present, a position in a rich upland soil, and is about an inch and a half in diameter. The fruit, while it is considerably improved in size, is equal in flavor to that produced in the swamps, and the yield is more abundant and certain. The smaller varieties of this excellent fruit, ordinarily found on plain land, and in openings, would doubtless well reward one for cultivating them, and prove as hardy and prolific as the cranberry, raspberry and other wild fruits which yield so readily to the hand and wishes of the gardener, when removed to a cultivated soil.—*Bumont Chronicle.*

CARE OF HOUSE PLANTS.—Plants in the house, require attention in keeping clean, as they are apt to throw off their foliage some little when first put in the house; have them carefully watered, and not kept too wet, at this season; give the plants sufficient water when they need it, and don't be giving a little at a time, whereby the roots receive no moisture—this is too often done, whereby many plants lose their buds, especially Camellias. Give them plenty of air when the weather is fine, and syringe occasionally; also fumigate, to kill the insects, and keep moderate fires, but do not force to a high temperature, without it is intended to supply an early bloom of flowers in the beginning of the winter.—*Am. Far.*

Mechanics' Department, Arts, &c.

For the New England Farmer.

MANUFACTURE OF CUTLERY.

From the increase of establishments for the manufacture of cutlery in this country, it would appear that we are able to compete, in our own markets at least, with the English makers; more especially in the coarser kinds, such as shoe and butcher knives, and table cutlery. Not but that we can make pocket cutlery, scissors, &c., equally as good as our neighbors across the water,—for we have seen American specimens of the best quality and highest finish,—but that in those kinds in which the higher price consists in the finish, which is all labor, they can undersell us at the present rate of wages in the two countries.

But, as stated above, the common article is, by means of improved machinery and division of labor, now made here at such rates as to nearly exclude the foreign article from our markets.

But to return to the more immediate object of this brief article, which was to notice the formation of a company in Claremont, N. H., for the purpose of manufacturing shoe and butcher knives, and table cutlery. The company goes under the name of Kimball, Clark & Co. They have expended some ten or twelve thousand dollars in machinery, and fitting up a building 100 by 40 feet, and four stories high. Considerable quantities of shoe and butcher knives have been made, and they are now beginning to make table cutlery. The wholesale prices of their wares are very low—say shoe knives 4 cents, and stout butcher knives 8 cents each. This establishment originated in Croydon, N. H., where the business is still carried on.

H. W. H.

THE ELECTRIC FIRE ALARM.

We copy from *To-day*, the new Literary Journal published in Boston by Charles Hale, the following account of the machinery recently put in operation in Boston:

"Likely enough, before these paragraphs are printed the Electric Alarm will have told its own story in louder tones even than our journal can. But our readers out of Boston, will not be the less interested in its operation.

For many weeks past the town has been covered with a reticulation of telegraph wire. With no connection with the different news wires, the centre of which is generally near State Street, here is another web radiating from the City Hall. They say that a large bird cannot well light in any part of the town, because hindered by the wires; as if it were a well preserved cherry orchard, at which the cherry birds look hopelessly from above. But really, this we are afraid is an exaggeration!

These wires radiate from the City Hall, as we have said. One set of them extends to nineteen different bell-towers, most of them on the churches. These are the towers or steeples, in which are the nineteen alarm bells.

Another set of the wires radiate to the alarm stations, of which there are forty. Very likely, our readers have already seen these boxes, for boxes they are, in their walks through the town. They are of cast iron: and so compact a town is Boston, that it seems there is in it no spot more than fifty rods from one of these boxes.

The key of each box is in the keeping of some responsible person in the neighborhood. Suppose now, dear reader, your house, or shop or ash-barrel takes fire—and that Mr. Barnum has not finished your fire-annihilator for you—and that your Cochituate fascet is out of order—so that, in short, you cannot do without the Fire Department on hand. Do not shout "Fire!" Why alarm your neighbors who cannot help you, when so much more easily you can summon the Fire Department, who can? No! you will go at once to this cast iron alarm box, whichever is nearest you—finding, as you go, him who has the key. Instantly you unlock it. You find in sight, only a modest crank, with the words above—"Turn six times slowly." Take hold and turn.

You have not turned your six times, and fairly stopped, before every one of these nineteen bells we told you of, is announcing with all its brazen voice, the number of your fire district. There are seven such districts. Do you live in No. 3? Then every bell from the North End to South Boston, from Brattle Street to Cedar Street, is tolling out, dom, dom, dom; three fatal claps telling every fireman where to go. And not only the district, but the precise number of the signal station, certainly within fifty rods of you, may be signalized with unerring certainty. Every hose company, every engine is concentrating towards you; you are in the centre of the town! What a great matter your little fire has kindled!

Nobody has opened the church doors. Nobody has "inquired at the opposite door" for the church keys. Only these inquisitive wires have set the bells a-tolling, and if you keep your fire a-going all day, all day will these bells toll if need be, dom, dom, dom—all day will they tell the town of your ashes in your barrel in your No. 3.

For in your alarm-box, your crank turning closed the connections of the electric battery, so as to tell the one watchman who cares for all this system, in the City Hall, which district was in need. This signal is effected by a simple mechanical contrivance. Before him are seven keys, numbered 1, 2, 3, 4, 5, 6, 7. At once he touches No. 3; because you live in No. 3. That starts the proper circuit; and the clock-work arranged in each tower, ready to strike the bells, begins, as we have told you.

The contrivance of this clock-work, by which it

takes and keeps the hint given by the central station, as to the number of strokes needed, is very neat, and exquisite in its ingenuity.

Now as soon as "all's out," another signal notifies the watchman. An eighth key sets all the bells to striking twice and once, twice and once; dom, dom—dom; dom, dom—dom. Then every fireman knows he is needed no longer and may go home.

The suggestion and almost all the details of this comprehensive plan are due to our townsman, Dr. William F. Channing. With his persevering zeal, and his clear explanation, he has persuaded the City Government of its utility. He has been seconded, by Mr. M. G. Farmer and other intelligent co-operators, who are now putting up the boxes—all the rest of the machinery being prepared, so that there is no room, we trust, to doubt the success of the first complete experiment.

A HINT TO BLACKSMITHS.—The cutting of bars of iron or pipes with the chisel, is a laborious and tardy process. By the following mode the same end is attained more speedily, easily and neatly: Bring the iron to a white heat, and then fixing it in a vice, apply the common saw, which, without being turned in the edge, or injured in any respect, will divide it as easily as if it were a carrot.

Ladies' Department.

For the New England Farmer.

FEMALE EDUCATION.

MESSESS. EDITORS:—Sometime since, I promised you an article, or some articles, upon the subject of *health and education*; these having been for several years my chief theme. I have read your valuable paper for some months with great pleasure and interest, and will now endeavor to redeem my pledge to write "somewhat" for its columns.

My present subject is *female education*. In speaking upon this subject, allow me to premise, that I do not appear as an advocate for *ultraism*, or, as what has been technically called *woman's rights*—though, I hope to make no objection to their having their *rights*.

The subject of female education, within the memory of the writer, (who has not yet lived half a century) was but little thought of. Men, and women too, who would strain every nerve, and endure great privations and expense to educate their sons, felt no necessity, and put forth no effort, to confer educational endowments upon their daughters. It seemed, in the language of the learned and facetious Trumbul, as though

"They loved Mahomet's rules, who holds
That women ne'er were born with souls,"

or intellects of any kind. Even clergymen, civil officers and professed instructors, were all in this condemnation. But within the last twenty-five years, a change, much for the better, has come over the community, and much more in keeping with the Christian religion. In all the States of

our union, female seminaries have been reared, richly endowed, and furnished with competent teachers. These have arisen through *private* munificence. Also, in our own commonwealth (and I think in some others) the *public* coffers have been opened for this same benevolent purpose, and the result has been the establishment of normal schools for the thorough literary qualification of female teachers; and those who have had the most to do with instruction in our public schools, have been convinced that females make by far the best and most successful instructors in them; especially is this the case with the younger portion, (which is much the larger) of the pupils. It is the opinion of many of the lovers of education, that it would be preferable to employ female teachers to males, even at the *same salaries*.

The enterprise of female education, which has for some time been thus smiled upon by private benefaction, and by the public endowment of normal schools, has recently received a new impetus by the regular chartering of literary colleges for females in several of the States of the union, of which there is one in Georgia, one in Missouri, and in several other States. These colleges have all the endowments, rights and privileges that are conferred upon the colleges of the land for the education of young men. They have power, and exercise it, of conferring *degrees* upon all who pursue a regular course of study for three years, and sustain a good and satisfactory examination upon the branches authorized and required to be studied by the faculty of such college.

This is as it should be. What valid reason can be advanced against it? With such examples of eminent women as have arisen in the world, it is quite too late to attempt to maintain that females are incompetent to attain as thorough and as finished an education, in all the branches of science and literature, as males. The Moores, the Hales, the Sigournays, and an almost innumerable multitude of others, stand up in fearful array against such an opinion.

To give, in the last place, the finishing stroke of education to females, a complete medical education is now proposed to be conferred upon all who seek it. To this end a college has been chartered, called the "Female Medical College, of Pennsylvania," located in the city of Philadelphia. It has as full a faculty and possesses all the powers and privileges of any other medical institution in that Athens or emporium of medical science. It is now giving its second annual course of lectures to a respectable class,—a class much larger in number than were the classes of males which attended the earlier courses of medical lectures either in Philadelphia or Boston.

It is well known, also, that efforts have been making for several years past to educate females for practising *certain branches*, in this community;

and, with whatever wisdom in management or success this school has formerly met under its simple act of incorporation, as a Female Medical School, the writer learns from a circular received, (and it is stated that the same circular has been sent to all the physicians of the city) from the directors, that their purpose is to make efforts to secure a full charter for a medical college at the next assembling of the Legislature. This, again, is as it should be. There ought to be no half-way work about it. Women should be either made physicians, or let medicine alone. We have no opinion of half-educated physicians, and we see no objection to opening a door for all females, who wish to have full instruction upon all subjects taught in any medical college. It seems to be carrying out, to its legitimate result, the efforts of the union to educate thoroughly all women who wish to receive an education.

W. M. C.

Boy's Department.

TRUE FRIENDSHIP.

If scandal or censure be raised 'gainst a friend,
Be the last to believe it, the first to defend;
Say to-morrow will come, and then time will unfold
That "one story's good till another is told!"
A friend's like a ship, when with music and song
The tide of good fortune still speeds him along,
But see him when tempest hath made him a wreck,
And any mean billow can batter his deck;
But give me the heart that true sympathy shows,
And clings to a messmate whatever wind blows,
And says, when aspersion unanswered grows bold,
Wait—"One story's good till another is told!"

FRANKNESS.

There are some persons who are never willing to acknowledge that they have done wrong. Whenever they are blamed for anything, they will be sure to have some excuse or palliation to offer, or they will contrive to turn the attention to the share which somebody else had in the wrong. James Benson was just such a boy. "Why, what a looking place you have made of this room, children!" his mother said, as she entered the parlor one day.

"Why, William took down every one of those books," vociferated James. "I didn't touch one of them; and Emily tore up that paper into little bits, and threw it upon the floor. I couldn't help it; I told her not to do so."

"Well, I should like now to have you gather up those quill tops and put them out of the way," interrupted his mother; "you know I have always cautioned you against letting your pen cuttings fall upon the carpet."

"Well, William has been cutting too. They are more than half his," replied James, instead of stooping at once to pick them up.

Now such a disposition as James showed here is far from being the right one. James had a hand in putting things into disorder, and his own blame was that he had any concern in it. It was nothing to him what his brothers and sisters had been doing. He ought to have acknowledged his own fault, and obeyed his mother's direction im-

mediately, instead of stopping to find excuses, or to tell what the others had done.

It is very mean and ill-natured to wish to bring others into difficulties, or expose their faults, when it will answer no good purpose. It is very absurd, too, for any person to suppose that he is any the less to blame himself, in any case, because somebody else has also been to blame. Suppose that a man who was brought to trial in a court of justice for the crime of stealing, should say in self-defence, "Why, to be sure I have been guilty of stealing: but then such a person stole too. He stole just as much as I did." This would be foolish enough; and yet nothing is more common than for boys and girls, when they are reproved for any misconduct, to begin to tell what some of their brothers, or sisters, or companions, have done that is quite as bad.—*Rev. Jacob Abbott.*

A WORD TO LADS.

Of the three modes of using tobacco, smoking is that which seems to have insinuated itself most extensively among the youth of our community. Tobacco employed in this way being drawn in with the vital breath, conveys its poisonous influences into every part of the lungs.

There the noxious fluid is entangled in the minute spongy air-cells, and has time to exert its pernicious influence on the blood—not in vivifying, but in vitiating it. The blood imbibes the stimulant narcotic principle, and circulates it through the whole system. It produces, in consequence, a febrile action in those of delicate habits. Where there is any tendency to phthisis and the tubercular deposit in the lungs, debility of those organs, consequent on the use of tobacco in this way, must favor the deposit of tuberculous matter, and thus sow the seeds of consumption. This practice impairs the natural taste and relish for food, lessens the appetite, and weakens the powers of the stomach.—*N. Y. Tribune.*

POWER OF KITES.—The power of a kite twelve feet high, with a wind blowing at the rate of twenty miles an hour, is as much as a man of average strength can stand against. With a stronger gale, such a kite has been known to break a line capable of sustaining 200 lbs. The surface spread by this sail is forty-nine square feet, and it should be noticed that these serve as standing ratios, from which, by the rule of proportion, the power of larger kites can be calculated. We must not, however, suppose that a kite of thirty-six feet in length has only three times the power of a kite twelve feet in length; for, in fact, it has three times the power in length, and three times the power in breadth, which will make the multiple nine; so that it would lift or draw nine times as much as a kite of twelve feet. Two kites, one fifteen feet in length, the other twelve, have power sufficient to draw a carriage with four or five persons when the wind is brisk.—*History of the Charvolant.*

BROTHERS—SISTERS.—The following feeling tribute to home influences will be responded to by many a wanderer from the paternal mansion and its dear inmates. Alas! that in some it should awake the painful recollection that the loved ones are no more of earth:—

"I am very proud of my sisters, and I am

grateful to them also ; for had I not such kind and affectionate sisters, and such a mother as I have, I do most sincerely believe that I never should have been successful in life. The thought of home and the loved ones there, has warmed my benumbed feelings and encouraged me to renew my efforts, by the reflection that there were, though far off, those whose happiness was at least in some degree connected with mine ; and I hold that no person can be entirely miserable, while there is in the world a single individual who will rejoice in his prosperity and feel sorrow for his adversity."

The Temperance Question.

HEARING OF THE PETITIONERS FOR THE MAINE LIQUOR LAW.

The first hearing before the Joint Special Committee of the Legislature, to whom was referred the petition for a law similar to the Maine Liquor Law, took place in the Representatives' Hall Wednesday afternoon. The chairman, Mr. Brigham, stated that any one who had anything to present for or against the petition, might now be heard. After a pause, the Rev. Mr. Otheman rose and said that he was one of the executive committee who had done much to bring before the people and legislature the subject we had met to consider ; that a gentleman whom all wished to hear, was in the city and would arrive shortly ; that meanwhile there seeming to be no other person desirous of occupying the floor, he would offer a few remarks. He proceeded to argue the question in a very clear manner, but in a few minutes, Neal Dow, Esq., was announced, and received with great applause. Mr. Dow proceeded to give a running history of the Maine Law. He said that the adoption of the law was not spasmodic, that it was the result of long thought and labor. They had tried for years to have some effectual law passed in Maine for the suppression of the rum traffic, but the legislature would throw their bills under the table, two thirds of the members being keepers of country grog shops. They then appealed to the people to know whether they would continue to be the mere instruments of what is facetiously called politics, that is, using the people as voters for the success of this or that aspirant for office. They were addressed on the subject in all parts of the State, and soon made such a demand as was not to be disregarded. In 1849 the law passed on the last day of the session, and the Governor put it into his pocket, but the people brought it back to the legislature to be passed again.

When it passed in 1851, only about 8000 names of petitioners had been presented for its passage, because the session was to be short, much business to be done, and the bill not expected to pass. But so well had the people made their will felt, that men who were opposed to it voted for it, and

the Governor who was known to be opposed to it, and was expected to veto it, remembering the fate of his predecessor, gave it his signature.

Mr. Dow now gave a brief but clear and very able exposition of the principal provisions of the law, and concluded with showing its operation and popularity, and giving reasons and arguments in favor of the passage of a law of the same kind in Massachusetts, referring to the precedent of the lottery law which was passed by Massachusetts, and copied by Maine and other States.

When Mr. Dow had concluded, Mr. Vinton was called upon, and made quite an able argument, showing the benefits of such a law, the necessity for it, and the determination of the people of Massachusetts to have it. He was followed by Mr. J. W. Goodrich, of the *Massachusetts Cata-ract*, Rev. John Pierpont, Rev. Lyman Beecher, and Father Taylor.

LEGISLATIVE TEMPERANCE SOCIETY.—This Society was organized at the State House, on Wednesday evening. Gov. Boutwell was chosen President, and Lieut. Gov. Cushman, Henry Wilson, N. P. Banks and Amasa Walker, Vice Presidents. The meeting was very fully attended, and addresses were made by Gen. Wilson, Mr. Williams, editor of the Taunton *Dew-Drop*, Mr. Dow, mayor of Portland, J. W. Goodrich, of Worcester, and the Rev. Lyman Beecher, in favor of the immediate passage of the Maine law.

Fruit Trees.



The proprietors offer for sale a large and fine stock of Fruit, and Ornamental Trees, Shrubs, Buckthorn Plants &c.

Pear, Apple, Peach, Cherry and Plum Trees of choice standard varieties. Also Quinces, Gooseberries, Currants, Raspberries, Strawberries, Grape Vines, &c.

Extra sized Hamburgs for the Conservatory or Grapery. A fine lot of Cherry and Apple Trees, two to four years from bud. The whole for sale at reduced prices.

D. & G. F. STONE,
Hammond Street, East Newton.
w16t—4t½

Jan. 10, 1852.

Chain Pumps.

CURBS, CHAINS, WHEELS and CRANKS complete. Also, Sanford Adams' celebrated Well Pump of wood, with important improvements. **CAST IRON PUMPS** of various sizes, at the lowest prices, by

RUGGLES, NOURSE, MASON & CO.
(Over the Market,) Boston.
3m*

Jan. 10.

New Milch Cows.

FOR SALE, full-blooded Cows,—Durham, Devon and Ayrshire; warranted first-rate as to milking properties.—Heifers from the same. Also, Suffolk Pigs, pure. Apply to JOHN H. DANE, Burlington, Mass., or JOHN DANE, 12 South Market Street, Boston.

Jan. 31, 1852.

6w—2*

Patent Spring Bow-Pins.

A LARGE lot of patent malleable iron Spring Bow-Pins, of superior quality and finish, just received and for sale at the Quincy Hall Agricultural Warehouse, (over the Market,) by

RUGGLES, NOURSE, MASON & CO.

Jan. 3.

if

Pure Suffolk Pigs.

A FEW pairs of PURE SUFFOLK PIGS, from the importation of the late Wm. Bickney, for sale.
Inquire at this office, or of LUTHER GILBERT,
Corner Tremont and Pleasant Streets.
Boston, Jan. 24, 1858. 11

For the Cure of

COUGHS, COLDS, HOARSENESS, BRONCHITIS, WHOOPING-COUGH. CROUP, ASTHMA, AND CONSUMPTION.

THIS remedy is offered to the community with the confidence we feel in an article which seldom fails to realize the happiest effects that can be desired. So wide is the field of its usefulness and so numerous the cases of its cures, that almost every section of the country abounds in persons, publicly known, who have been restored from alarming and even desperate diseases of the lungs, by its use. When once tried, its superiority over every other medicine of its kind is too apparent to escape observation, and where its virtues are known, the public no longer hesitate what antidote to employ for the distressing and dangerous affections of the pulmonary organs, which are incident to our climate. And not only in the formidable attacks upon the lungs, but for the milder varieties of Colds, Coughs, Hoarseness, &c., and for Children it is the pleasantest and safest medicine that can be obtained. No family should be without it, and those who have used it never will.

HEAR THE PATIENT.

HANOVER, OHIO, April 3, 1856.

Dear Sir:—I wish I could tell all that suffer with a cough, what your Cherry Pectoral has done for me. It does seem they might be benefited by the information. I had a lung fever, which left my lungs weak and inflamed. Being very feeble, and unable to gain strength at all, my friends thought I must soon sink in consumption. I had no appetite, and a dreadful cough was fast wearing me away. I began to take your beautiful medicine, by the advice of a clergyman, who had seen its effects before. It eased my cough at first, and gave me rest at night. In less than a fortnight I could eat well, and my cough had ceased to be troublesome, my appetite returned, and my food nourished me, which soon restored my strength. Now, after five weeks, I am well and strong, with no other help than your Cherry Pectoral.

Yours, with respect, JULIA DEAN.

I hereby certify that the above statement of my wife is in conformity with my own views of her case and her cure by Ayer's Cherry Pectoral. JOSEPH DEAN.

The above-named Joseph Dean, and Julia, his wife, are personally known to me, and implicit confidence may be placed in their statement. SAMUEL C. VAN DERWANT,
Pastor of the Baptist Church.

FROM ONE OF THE FIRST PHYSICIANS IN MAINE.

SACO, ME., April 26, 1856.

Dr. J. C. Ayer, Lowell:—Dear Sir—I am now constantly using your Cherry Pectoral in my practice, and prefer it to any other medicine for pulmonary complaints. From observation of many severe cases, I am convinced that it will cure coughs, colds and diseases of the lungs, that have put to defiance all other remedies.

I invariably recommend its use in cases of consumption, and consider it much the best remedy known for that disease.

Respectfully yours, I. B. Cushman, M. D.

PREPARED AND SOLD BY JAMES C. AYER,

Practical Chemist, Lowell, Mass.

Nov. 1, 1851.

44—3m

Devon Bull Wanted.

THE Editor of the *New England Farmer* wishes to purchase a pure DEVON BULL, about two years old. Apply at office. 111
Jan. 31, 1858.

Middlesex Agricultural Society.

At a meeting of the Trustees of the Middlesex Agricultural Society, held January 3, 1858, it was Voted, that the Exhibition and Cattle Show be held this year at the place for which the most new members will join the society before the first of March next, not less than fifty for one place, and if no place obtain that number, that the Cattle Show be held at Concord. Voted, also, that the Secretary publish the above vote in the newspapers of the county, with the regulations for obtaining new members.

By the By-laws of the Society, "any citizen of the county may join it by paying five dollars," and shall receive a Diploma which entitles him to all the privileges of membership, among which is that of receiving 10 per cent. additional on all premiums obtained by him.

The Society needs funds to enable it to offer antitaxable premiums, and it is to be hoped that all parties of the county will make an effort to increase its funds and to obtain the Exhibition this year.

Applications for membership received by the Treasurer, JOHN S. KEYES, Esq., at Concord, or by the Trustees in each of the towns. SIMON BROWN, Secretary.
Concord, Jan. 31, 1858. 5m

Agricultural Warehouse and Seed Store,

Quincy Hall, over the Market, Boston.

THE Proprietors having recently enlarged their Warehouse, and increased their works at Worcester, would respectfully invite the attention of Planters and Dealers in AGRICULTURAL and HORTICULTURAL IMPLEMENTS, GARDEN and FIELD SEEDS, &c., to their stock, comprising the largest and best assortments to be found in the United States, which are offered at low prices.

OF PLOUGHS—we have the greatest variety of kinds and sizes.

Improved Rod Ploughs, for fast furrows—Improved Sco Ploughs, for lapped furrows—Improved Stubble Ploughs, which are especially adapted to deep tillage, or varying from 6 to 12 inches in depth.

Self-sharpening, HILL Side, Sub-soil, Double Mould, Corn, Cotton, and Rice Ploughs.

Cylinder Hay Cutters, Smith's Patent Lever Gate, and others. Patent Corn Shellers, with and without Separators. Seed Sowers, of various sizes and prices. Batchelder's patent Corn Planter, improved. Fanning Mills of various sizes. Horse Powers, Thrashing Machines, thermometer Churns, Robbins' patent Centrifugal Churns, Cylinder Churns, Dash Churns, Corn Planters, together with almost every article wanted on the Plantation, Farm or Garden.

Illustrated Catalogues sent gratis on application, post paid. RUGGLES, NOURSE, MASON & CO.
Boston and Worcester, Mass., March 1, 1851. 10—11

TO ALL AGRICULTURISTS, Horticulturists and Florists.

THE following Valuable Books have just been published by JOHN F. JEWETT & CO., 17 and 19 Cornhill, Boston

BRECK'S BOOK OF FLOWERS,

Being a complete guide to the cultivation of a Flower Garden; by Joseph Breck, Esq. Price 75 cents.

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A thorough work on the management of the Kitchen Garden; by Peter A. Schenck. Price 50 cents.

A TREATISE ON HOT-HOUSES,

Their Construction, Heating and Ventilation; by R. B. Leachman, Esq. Price \$1.00.

COLE'S AMERICAN VETERINARIAN.

Or, Complete Farrier; by S. W. Cole, Esq. Price 50 cents.

COLE'S AMERICAN FRUIT BOOK,

Or, Complete Orchardist; by S. W. Cole. Price 50 cents.

48,000 COPIES

Of Mr. Cole's two excellent books have been already published. The above valuable books are for sale by the principal booksellers throughout the country.

500 AGENTS WANTED!

To sell the above in every State in the Union. Address, (post paid,) the publishers. 51
Jan. 10.

Corn Shellers.

IMPROVED YANKEE CORN SHELLERS, with and without separators. These machines are adapted to large and small varieties of corn, will shell rapidly, and are not liable to get out of order. For sale, wholesale and retail, over Quincy Market, Boston, by

RUGGLES, NOURSE, MASON & CO.
Jan. 3. tf

State Mutual Life Assurance Co. OF WORCESTER.

GUARANTEE CAPITAL, \$100,000.

Hon. JOHN DAVIS, President.

Hon. ISAAC DAVIS, } Vice
Hon. STEPHEN SALISBURY, } Presidents.

THIS Company was chartered in March, 1844, and commenced business on the first of June, 1845. Its business is conducted on the most economical principles.

The well considered and invariable policy of this Company has been to prefer the safety and mutuality of the assured to the showy advantages of a large number of policies, and an imposing amount of receipts. California risks have been uniformly declined, and the multiplication of policies in cities considered especially liable to cholera has not been encouraged.

The cash premiums of this company are calculated on the most approved tables of the probability of life, and at the lowest rates which are deemed safe.

Pamphlets, explaining the principles and advantages of life assurance, with forms of application and rates of premium, may be had by application at the Office of the Company in Worcester, or of the Agents in all the principal towns in New England. **CLARENDON HARRIS, Secretary.**
Dec. 27, 1851. 1st*

Hay and Straw Cutters.

A LARGE assortment of HAY, STRAW and CORN STALK CUTTERS, of all sizes, for hand and horse power. We have made an improvement in the machines by covering the cylinder with guards, rendering them entirely safe even for children to handle. Sold at the lowest prices, wholesale and retail, by

RUGGLES, NOURSE, MASON & CO.
(Over the Market,) Boston.
3m*

Jan. 10.

Farm for Sale.



By license of Court, will be sold at Public Auction, on the premises, in HUBBARDSTON, Mass., on Wednesday, MARCH 17, at 10 o'clock, A. M., a Farm, about half a mile from the centre, and 19 miles from Worcester, containing 188 acres of land, about one-half of which is Woodland, and of good growth. There are about 20 acres of Upland. Also, eight acres of good Reclaimed Meadow, sufficiently dry for cultivation. The remainder is mostly good Meadow, covered in part with Cranberry Vines, and nearly the whole might be profitably converted into good Cranberry Meadow, as it can easily be drained or flowed, at the option of the owner.

There is on the premises a good two-story House, Barn and other outbuildings, all in good repair. Terms easy, and made known at time of sale. Said farm belonging to the estate of Willard Earle, late of Worcester.

Also, will be sold at same time and place, Farming Tools, Hay, &c.

For further information apply to **GEORGE HAMILTON**, on the premises, or **EDWIN CHAPIN**, Worcester, Mass.

RHODA A. EARLE, Guardian
For Chas. N. and Louisa S. Earle.
7wis

Jan. 31, 1852.

Sausage Meat Cutters.

IMPROVED MEAT CUTTERS, will cut 150 lbs. per hour. Also, SAUSAGE STUFFERS, with large and small tubes, at very low prices, by

RUGGLES, NOURSE, MASON & CO.
(Over the Market,) Boston.
3m*

Jan. 10.

Wanted to Buy,



A Farm in the neighborhood of Boston, by a person who has for sale some property in California, and will pay the balance of the purchase in money.

A gentleman who is going to California, and wants to sell his estate, will find this an unusual opportunity. A letter post-paid to W. H., Box 1700 Boston P. O., will meet prompt attention.
6w*

Jan. 31, 1852.

Bolton Grey Fowls.

SEVERAL pairs of this favorite breed can be obtained by applying (post-paid,) to the subscriber, at Dorchester, Mass.
GEORGE DORR.
Dorchester, Dec. 6, 1851. 50—8w

Farm and Nursery for Sale.



The subscriber offers his Farm and Nursery for sale, situated in WESTFORD, Mass., half a mile from the centre of the town, on the main road, and seven miles from the city of Lowell. Said Farm contains about sixty acres of land, consisting of Tillage, Pasturing and Woodland. Said Farm is pleasantly situated within half a mile of the Stony Brook Railroad Depot, and Grist and Saw Mill, and half a mile from the Meeting-house, Academy and Town School. There is in said Nursery about 25,000 Trees, from one to three years on the bud, consisting of Apple, Peaches, Pears, Plums and Cherries; also, Forest Trees, all in good thriving condition.

The buildings are all new and convenient. There is no nursery within seven miles, which gives it a pre-eminence over many other places. The purchaser can have all or part of the land attached to the buildings and nursery, and the conditions of payment will be made satisfactory.

For further particulars inquire at this office, or of **ELISHA BUNCE**, or the subscriber, living on the premises.

SOLOMON RICHARDSON.

Westford, June 28, 1851. 26—1f

Garden Seeds.

WE respectfully solicit the attention of purchasers of **GARDEN SEEDS** to our extensive stock, which we offer for sale. We have all the sorts of Vegetable Seeds that have proved worthy of cultivation; also, Grain, Grass and Flower Seeds. All the varieties are raised and selected expressly for our trade, and we do with confidence recommend them to all who desire to procure seeds that will prove true to their names.

☐ Catalogues gratis, on application.

RUGGLES, NOURSE, MASON & CO.,

Jan. 1. Over Quincy Market, Boston.

Zinc Milk Pans.

A NEW ARTICLE, without seam or solder, and will not rust. At wholesale and retail, (over the Market,) Boston.
RUGGLES, NOURSE, MASON & CO.

Jan. 10.

3m*

Cattle Ties.

OX AND COW TIES, of all sizes, a large assortment; also, Draft and Trace Chains; just received and for sale low by **RUGGLES, NOURSE, MASON & CO.,** (over the Market,) Boston.
3m* Jan. 10.

Farm for Sale or to Let,



Situated in CONCORD, Mass., on the main road leading from Boston, containing about 70 acres, with a good dwelling-house and barn on the same. The land is well divided into Mowing, Tillage, Pasture and Woodland.

☐ Inquire at No. 5 BROMFIELD STREET, Boston.
Jan. 31, 1852. 3m1s

Cast Steel Axes.

SUPERIOR Cast Steel AXES, of "Hunt's," "White & Olmstead's" and "Hannum's" manufacture, all warranted. For sale, wholesale and retail, by **RUGGLES, NOURSE, MASON & CO.,** Quincy Hall, (over the Market.) Boston.
Jan. 10. 3m*

Farm for Sale.



A Farm situated in the most pleasant part of the town of BROOKLINE, N. H., containing 40 acres of good land, well divided into mowing, pasture and tillage. The mowing land has all been laid down within five years, and bears a heavy crop, which will continue to increase. The pasturing is equal to any, and is irrigated by a running brook. The tillage land is under a high state of cultivation, and needs only to be seen to be admired. The buildings consist of a good house, two barns, and all necessary out-buildings, in good repair. Also, a good orchard of grafted fruit, with Cherry, Pear, Quince, Peach and Plum trees.

The above will be sold low, as the health of the owner will not stand the labor of a farmer's occupation.

Application may be made to **JOSEPH SHARLAND**, at 334 Washington Street, Boston, or on the premises to
33—1stf THOMAS BOWTHORPE.

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The Working Farmer.

A MONTHLY Periodical devoted to Agriculture, Horticulture, Floriculture, Kitchen Gardening, Management of Hot Houses, Green Houses, &c., embracing Agricultural Chemistry, Preparation of Manures, &c.
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COWS, HEIFERS, BULLS and BULL-CALVES for sale
 Apply at Office of N. E. Farmer, or to the subscriber.

B. V. FRENCH,

Dec. 27, 1851.

1yr*

Braintree, Mass.

The postage on the New England Farmer, monthly, is as follows:

For any distance not exceeding 50 miles 5 cents per year.
Over 50, and not exceeding .300 miles.. 10 cents per year.
Over 300 " " 1000.....15 " "
Over 1000 " " 2000.....20 " "
Over 2000 " " 4000.....25 " "
Over 4000 " "30 " "

To prevent any misunderstanding, we quote the 16th section of the law of 3d March, 1845, which is as follows:

Sec. 16. And be it further enacted, that the term "Newspaper," herein before used, shall be, and the same is hereby defined to be, any printed publication, issued in numbers, consisting of not more than two sheets, and published at short stated intervals of not more than one month, conveying intelligence of passing events, and bona fide extras and supplements of such publication.

PROSPECTUS FOR 1852.

NEW ENGLAND FARMER,
WEEKLY,

AN INDEPENDENT JOURNAL,—PUBLISHED EVERY SATURDAY, ON A LARGE, HANDSOME FOLIO SHEET.

The proprietors design furnishing a first-class Agricultural and Family Newspaper—a Journal which shall be valuable to the Farmer, the Mechanic, and all other professions; and at the same time, equally welcome to the Home Circle. They are happy in announcing the names of SIMON BROWN as Editor, and FREDERICK HOLBROOK and HENRY F. FRENCH, Associate Editors,—gentlemen who have had practical experience on their own farms, and who are too well known by the public to require any farther introduction or recommendation from us.

Besides the main subject of Agriculture, will be included Horticulture, Floriculture, Arboriculture, and the various sciences connected with these branches, such as Geology, Chemistry, Botany, Meteorology, Zoology, &c. Rural Architecture, Landscape Gardening, Rural Embellishments, Domestic Economy and Mechanic Arts will also claim particular attention.

Careful attention will be given to the Markets, wholesale and retail, every week.

The other departments of the paper, under the charge of WILLIAM SIMONDS, will include a full and careful report of the news of the week, such as Domestic, Foreign and Marine Intelligence, Congressional and Legislative proceedings, Temperance and Religious Intelligence, and a general variety of Literary and Miscellaneous matter, adapted to family reading, comprising more useful and valuable reading matter than any other Agricultural Newspaper published in New England. Everything of a hurtful or even doubtful tendency will be carefully excluded from its columns.

TERMS \$2 PER ANNUM IN ADVANCE.

NEW ENGLAND FARMER,
MONTHLY,

Is published at the same office on the first of every month, in book form, devoted exclusively to Agriculture, Horticulture, and their kindred arts and sciences; making a neat volume of 576 octavo pages, embellished with

NUMEROUS ENGRAVINGS.

The monthly contains nearly the same matter as the Agricultural department of the weekly.

It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at this office.

TERMS \$1 PER ANNUM IN ADVANCE.

At the end of the year, the publishers will bind the monthly Farmer GRATIS for any person who subscribes for both publications, paying one year in advance for each.

Postmasters and others who will forward four new subscribers on the above-named terms, for either publication, shall receive a fifth copy for one year.

All orders and letters should be addressed, post-paid, to

RAYNOLDS & NOURSE,

QUINCY HALL, SOUTH MARKET STREET,

JOHN RAYNOLDS, }
 JOEL NOURSE. }

BOSTON.

Early June Potatoes.

THIS fine variety is fit for the market by the middle of June, as its name indicates. Unlike any other potato, it is as merly at that season as the Mercer in midwinter. Its eye is good and it also produces as abundantly as the Mercer. They will be delivered on board of any vessel in New York at \$4 per barrel of 24 bushels.

Address S. B. PARSONS, Flushing, near N. Y.
 Jan. 3.

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RAYNOLDS & NOURSE, PROPRIETORS.
OFFICE....QUINCY HALL.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.**FARM WORK FOR MARCH.**

March is usually a rough and boisterous month—a continued contention of the elements for the mastery. Now, the glad sunlight rests upon the earth and soft airs from the south call out the blue-bird and robin, and invite us into the garden to look at the snowdrop, the crocus and yellow hellebore, the first sweet harbingers of spring. But ere the birds have finished their song or the flowers unfolded a leaf, hoarse breathings at the North are heard, and down comes old Boreas again with all "his attendant train" of hail, sleet, wind and snow. Like a bright meteor, the golden moments quickly passed, and winter reigns again supreme.

But March weather, rough and blustering as it is, could not be spared. Its rude winds are ordained to sweep away the surplus moisture and prepare the soil for the hand of the cultivator. The old proverb tells us that "a peck of March dust is worth a king's ransom." It indicates continued dry weather and a suitable condition of the soil for the reception of seed. Were these winds hushed, and the redundant March moisture remain, seeds would not germinate, but rot and decay. "A dry and cold March never begs its bread—because it prepares the earth for seed time—but a wet March makes a sad August," because the ground is saturated with cold water, the seed is spoiled and yields no crop in August.

The winter has been stern and cold—we long to see the streams unlocked, to think that "the winter is over and gone"—to hear the birds singing, and feel the warm sunshine and balmy air. We cast lingering looks up and down the garden walks where a crocus is peeping from the rubbish, among which the warbling sparrow tunes his little throat, though thick flakes of snow may be falling fast. We are impatient for genial skies and gentle winds, without counting the cost of an enjoyment of them *now*. We forget that "the late spring makes the fruitful year," and that if we

have April suns and showers now, April frosts will pinch the buds and blossoms which they have produced, and we shall have neither fruits nor flowers in due season; and this explains the other old proverb, that "March flowers make no summer bowers."

But there will be days of sunshine and softness, in March, and spots in the garden or field ready for the exercise of a skilful hand, and these, with various other matters, demand the attention of the husbandman *now*.

CLOVER SEED.—This month is a suitable time for sowing clover seed on fields laid down to grass in August or September last. Clover is apt to be winter-killed, and most persons leave the seed for spring sowing. It may be scattered upon the snow, which affords a good opportunity for ascertaining how thick to sow it; or upon the ground, or even where the water is standing—there is no difficulty in its coming now.

EARLY POTATOES.—Prepare potatoes for early planting by sprouting them in horse manure, or in barrels by the kitchen stove. Plant in some sunny border or sheltered place and you may have fine potatoes by the 20th of June, or earlier if all circumstances are favorable.

HOT BEDS.—See that these are in order, and start your tomatoes, lettuces, egg plants, &c.

GRAPE VINES.—Make a judicious trimming of these, and shorten down to three or four eyes of the vigorous shoots of last years' growth. Prune apples, and other fruit trees—that need it—but not to indulge a fancy for using the knife and saw, as that may more properly find vent on the wood pile. Look after the currant and other bushes; clip the tops and tie up the raspberry bushes that were neglected last fall, and you shall find an abundant recompense by-and-by.

FRUIT STONES.—Sow such fruit stones as have been preserved, and mark the rows of each.

PLOWING.—Stubble or other fields on sandy land intended for potatoes may be plowed this month. In

such case potatoes may be planted quite early, and thus, perhaps, escape the rot. Sward ground, intended for corn, it is better to plow with a good coat of grass on it; this affords a very considerable nourishment to the crop planted and facilitates the decomposition of the turf.

IMPLEMENTS.—Every farmer should have some place which he calls a shop where he can repair and perhaps make some of his coarse, cheap implements. But his plows may be purchased cheaper, and will be altogether better made by exact patterns in the hands of skilful workmen, where the true pitch, line of draft and all other things will be right. So of his harrows, cultivators, and most large implements. Are all your implements in good order for use?

FOUL IN THE FOOT IN CATTLE.—This is one of the worst diseases to which our neat stock is subject. Attacking a single animal, it sometimes spreads to the whole herd, occasioning great loss, inconvenience and trouble to the owner, and much suffering to the poor animals themselves. The disease is undoubtedly occasioned by the animals travelling through the mud, urine, and manure of the yard; this collects between the claws and gathers about the foot and leg until this obstinate and sometimes fatal disease is generated, and it is legitimately in the farmer's work for March to prevent it. Keep the feet of your animals clean, and there will be little danger of the disease. Its first appearance is generally between the claws in the form of a crack; this is followed by inflammation and the discharge of a yellowish matter or pus. "Sometime a little swelling appears on the coronet between the hair and hoof, which discharges offensive matter." Foul in the foot is a most serious disease, and demands immediate attention when the first symptoms are discovered. Attacked in March, oxen are sometimes rendered unfit for any spring work, and cows shrink rapidly in milk and flesh. If not checked early the foot becomes greatly swollen, intensely sore, and the hoof in bad cases drops off. It may all be prevented by care and cleanliness.

FENCES.—Where the frost is out, build up gaps in the wall where it has been thrown down by its action or other causes—repair the board or rail-fences now before the seed-time demands your attention. If by plowing and sowing early you lose a little seed, it is better than to postpone all your work until the soil is in the most fitting condition. Early crops cover the ground and get established before our usual summer drouths come on. They thus prevent excessive evaporation, and hold in reserve the moisture which would otherwise escape during the long, hot dry days of midsummer.

STOCK.—Look well to the stock and guard against disease of every kind. A few roots fed to the sheep will prove of great service, after feeding upon dry hay for months. Where evergreens are

convenient, scatter them about their yard. They will show you at once how they appreciate them.

Do not feed cows too highly, either immediately before or after calving. It is a practice with some persons to feed meal to the cow just before calving. Instead of this it would be better to withhold a small portion of the usual food. Sprinkle a little yellow snuff or ashes over the backs of both cattle and swine—judiciously applied, it will do no harm, and will prove inconvenient to any vermin who may make a call there.

SYSTEM.—Plan all your spring operations this month and it will save you a deal of vexation.

For the New England Farmer.

GRAFTING THE SIBERIAN CRAB APPLE.

BY A YOUNG DIGGER'S COUSIN.

MR. BROWN:—Having noticed an article in the *N. E. Farmer* of Jan. 3d, signed "A Young Digger," in regard to the Siberian crab apple, I take this opportunity to give the result of my experiments.

About twenty-five years since my father bought six Siberian apple trees, which were set out and cultivated, not simply as ornamental, but with the hope of deriving a profit; but after waiting about sixteen years with no income from them, in 1843, instead of laying the "axe at the root," I had the saw put at the top of four out of the six, and scions of the Red Baldwin and Red Shropshirevine inserted, and the growth of the scions far exceeded my most sanguine expectations, being in two years equal to that on any of the common apple trees. These four stood on the east side of a stone wall running north and south, and being in a rather warm situation, the two grafted with Shropshirevines were sun-struck, and died, the fifth year from grafting—which is not unusual with this variety, as the bark of the Shropshirevine tree is very thin and is more liable to be sun-struck than any variety with which I am acquainted. I should recommend to those grafting the Shropshirevine, to insert their scions in trees standing on the north of buildings, or on the north side of trees, so that the limbs may be screened from the scorching rays of the sun, as this variety flourishes better in a colder or more northern latitude. The two grafted with Baldwins did well, and bore a handsome crop the third year from grafting, and have borne two crops since, the three crops being worth \$25 from trees which had not borne a crop before worth one dollar. The apples were as large and fair on these trees as those grown on other trees, keep well, and not a little pains is taken to obtain scions from the trees. The result of grafting the four out of six Siberian apple trees was so satisfactory that it was thought best in 1848 to graft the two remaining. I selected scions of six varieties of apples, and two or more of pears, and had them inserted the last of May, 1848. The growth of the scions was rapid, and the next year the grafts of the Bartlett pear blossomed and bore several as large Bartlett pears as I ever saw. The next year the pear scions broke out, and I have satisfied myself by experiments tried for the last ten years, that you can calculate with no certainty upon pear scions inserted in apple stocks, the nature of the two

being so different the union is imperfect. I once saw a pear tree on an apple stock which had been growing 12 or 15 years and bore pretty well, but I have not had them live over four years. In each stock I had a pear and an apple scion inserted, so that when the pear scion should fail, its place might be occupied by the apple scions, and the result was that the third year, 1850, the pear and apple grafts both blossomed, but the pear grafts broke out in July or August, having pears on them half or two-thirds grown. The following autumn the apple grafts fruited, which with the Siberian apples growing on the ungrafted scattering limbs, presented a contrast which was not only pleasing to the eye but a source of profit to the pocket, and the object sought for in grafting was obtained.

Finally, in reply to the inquiries of "A Young Digger," are stocks from the seeds of the same nature, and do they make as large and long lived trees, as stocks from the seeds of other varieties? I will say, if you insert buds or scions of the common apple tree in small stocks of the Siberian apple, the result will be dwarf trees. Stocks from the seed are of the same nature, but I doubt very much their growing as large as the common varieties; and as to the Siberian stocks making as long lived trees as those of the common varieties, I should doubt it, from what specimens I have seen in the New England States and New York. I am not so well prepared to answer as the boy was when asked how long a certain kind of rails would last, replied "they would last three or four generations, for his father had tried them."

Southboro', Jan. 20, 1852.

THE LOCUSTS.

Gideon B. Smith communicates the following intelligence in regard to the seventeen year locusts to the *Baltimore Patriot*:

"The seventeen year locusts will appear this year in Connecticut, east of the river, in portions of Tolland, Middlesex and Hartford counties, about Manchester, Glastonburg and Chatham, and most probably in a portion of Massachusetts north of these places. They will also appear in Franklin, Bristol and Hampshire counties, Massachusetts, and especially about Fall River. I have been unable to ascertain whether they will appear in Rhode Island, but they most probably will in the neighborhood, especially adjacent to Massachusetts at Fall River. In Barnstable and that neighborhood in Massachusetts they will not appear until 1855. The grubs or larvae of these insects may now be found in all places in the above districts where forest or other hard-wood trees and shrubbery grew seventeen years ago, by digging two or three feet in the ground.

They will be found singly in their little horizontal cells, in a half-torpid state. About the first of May they may be discovered by merely shaving off the top soil with a spade, when their chambers will be found completed near the surface of the earth. It would serve the cause of science if some one in those districts would take the trouble to make these researches, and also to watch their first appearance above ground, which happens several days before any notice is attracted to them.

I expect they will first begin to emerge about the 1st of June in the above districts. This early notice is given of their expected appearance, that

those who have the opportunity may be prepared to take the proper notice of them. I shall be very glad to receive any information on the subject that may be elicited."

For the New England Farmer.

AXLETREES.

MR. EDITOR:—I find in the *N. E. Farmer* of the 13th ult. a communication from Wm. D. Brown, on "Oiling Axles." I think his views correct on the subject, and his remarks might be extended a little further. Your correspondent recommends using sperm oil for oiling axles, in preference to any other kinds of grease; but what I have found to be still better than that, is olive oil. I have a common one-horse buggy wagon, which is the only carriage I have for the use of my family, which cost me for an outlay to furnish it with olive oil for the past season, the sum of *one dime*. I think it is the best and cheapest article that can be used. Mr. Brown, in his communication, says that he "don't believe in the economy of wooden axletrees at all," but we farmers in Vermont think we get a greater amount of strength, compared to the weight of the axletree, from wood than from iron.

Will not some scientific mechanic inform us on this subject.

INSLEY DOW.

East Corinth, Vt., Jan., 1852.

✂ We have received a copy of the excellent Address of COL. M. P. WILDER, before the *Berkshire Agricultural Society*, at Pittsfield, in Oct. last. It is a 'plain, practical, earnest production, containing many valuable statistics, and admirably adapted to influence the farmer to a more careful consideration of his own interests. In the present crowded state of our columns, we have only room for the following extract, which we hope every farmer in the union will read:

"True, we have agricultural papers and periodicals, and they have wrought wonders in the dissemination of knowledge. Where there was only one ten years since, there are now a dozen, urged on in their noble cause by a generous rivalry and competition, and it is estimated that in New England alone, there are sent out, weekly, more than fifty thousand copies. These are cheering omens. Their rapid increase and extension, evince the growing interest of the community in this department of literature. Where they were once ridiculed as chimerical and visionary, they are now hailed as the welcome messengers, and as the best friends of the farmer. Let then no farmer deny his sons the advantage of at least one paper, which is either wholly or in part devoted to this subject."

FARMER AND PLANTER. Pendleton, S. C., GEO. SEABORN and J. J. GILMAN, Editors.—Papers devoted to Agriculture and Horticulture are springing up in many portions of the country where none have heretofore been published, and a new era in the art has dawned upon us; while those which have attained some years, are assuming new forms and attractions. The one before us gives evidence of talent and thrift. Its editorials and remarks

upon the subjects which come before it are sound and instructive. The land of cotton and the cane is progressing with us in these days of improvement.

For the New England Farmer.

A FEW REMARKS ABOUT HEDGES.

BY HENRY F. FRENCH.

MY DEAR BROWN:—You write that a friend wishes me to give some information about *Hedges*, through the *N. E. Farmer*. I take pleasure in doing so, because I think true *economy* as well as good taste requires more attention to the subject.

Every one desires to surround his home with beautiful objects, and much money is thrown away to gratify *false taste*, when the *true* may be satisfied at little cost. I do not recommend hedges for enclosures, merely as fences, to stop cattle, because stumps, and stones, and logs, and rails, and boards, are cheaper and safer, for us of New England. But for all localities, where ornament is regarded, as for lawns, and what we Yankees call *front yards*, there is nothing so beautiful, and nothing, which is decent, so cheap.

One of the most common monuments of folly in our villages, is a fanciful front fence, elaborately wrought out of white pine boards, in diamonds, squares and circles, at an expense of twenty dollars a rod, instead of a living hedge, which all will admire, of a twentieth the cost.

The Buckthorn, Hawthorn, Privet, Triple thorn Acacia, known also as the Honey locust, and the Osage Orange, are the plants most used for hedges.

It is pretty well agreed, that the Osage Orange is not hardy enough to bear the cold of winter so far North as Boston. The Hawthorn makes a beautiful, strong hedge, but has been so generally attacked by the borer, as to suffer much in its reputation.

The Acacia is a plant of very rapid growth, throws out thorns, often five or six inches long, and in four or five years, makes a fence, which nothing short of the *Old Scratch* himself would undertake to get through. Its foliage is very beautiful, the leaf resembling that of the Sensitive Plant, and the hedge altogether is handsome enough while its glory remains. But it is very late in putting on its summer costume, and drops its leaf at the touch of the early frost, and this in a climate where we have seven months of winter, and five more pretty cold weather, is a serious objection. However, it has, at any time, as many leaves, and as much grace and beauty, as a board fence, so its three or four months of verdure is so much gained. The Acacia is also said to be attacked by the borer, but I have seen it in great perfection, and free from any attack of that enemy. My own hedge, of this kind, ten rods in length, has entirely escaped, during its growth of three years.

The Privet, for a merely ornamental hedge, has many claims to attention. It is a *shrub* in its character, and not, like the Acacia, inclined to grow into a tree. Hence, it is readily kept down, and throws out its branches close to the ground, and so is easily brought into proper form, by cutting. It is called by nurserymen, a *sub evergreen*, and holds its foliage and verdure until the snow flies. It is of no use as a fence, but for a screen, or ornamental division of grounds, is unsurpassed

by any plant in use. It is said to be perfectly hardy, and free from the attacks of insects. I have never seen a full grown hedge of the Privet, but the half-grown ones which I have seen, accord with the character I have received of them, and which I have given above.

As to the *Buckthorn*, we know all about it, for the beautiful square, opposite the Phillips Academy in our village, owes all its beauty to the buckthorn hedge which encloses it. That hedge was planted under the direction of the lady of the late Doctor Abbott, more than fifty years Principal of our Academy. Within the memory of a citizen of our village, but recently deceased, the grounds, in that part of the village, were a barren, drifting sand, so loose that the street was covered with poles and slabs, to prevent the wheels from cutting down. Now, in summer, it displays as agreeable a bit of landscape, of lawn, and hedge, and drooping elms, shading a smooth, graveled street, as can easily be found. Thus may the "waste places" be made to bud and blossom, all around, especially where "woman lends her helping hand, and taste refined."

The Buckthorn is growing all about us. It has been long known and tried, and on the whole, I should recommend it before all others, for a single hedge. It is clean, healthy, free from the borer, and all other enemies, may be cut into any shape, and when properly cared for, presents a compact mass of living green, from the ground to any height desired. A hedge of a dozen years growth should afford protection against cattle, but the animals of our free country are so accustomed to thickets, through which they press, at pleasure, and so ignorant, withal, about the whole system of hedge fences, that I hardly dare advise my friends to rely entirely on this species of hedge, to prevent their depredations, at least, for several years from planting.

You inquire about the mode of planting, and the management afterwards. I will tell you how I set mine, and your readers may improve upon my method, if they can. I have of the Buckthorn, about thirty rods, set out in 1849, '50 and '51.

My land being light and sandy, I threw out the earth, forming a trench about three feet wide, and eighteen inches deep, filled it up with turf and soil about half full, and the rest with good soil and compost manure, half and half. I set my plants on the trench, ten inches apart in a *single row*, in April or May, and cut them down to within four inches of the surface. I keep the land light and free from weeds, and cut the plants every autumn so that they gain but *six inches* height each year, the main object being to get the hedge thick at the bottom. Some of my plants I have cut twice, once in Summer and once in Fall or Spring. I am not decided whether they should be cut once or twice. My plants grew the first year, about two feet, and afterwards they have made shoots three or four feet long, when not stopped, in Summer. I procure my plants, and most of my fruit trees, from WILLIAM HALL, of Bradford, Mass., a gentleman of taste and intelligence in these matters, and on whose integrity you may depend. Hedge plants may be procured of him, for, from one to two dollars per hundred.

If your inquiries are not all answered, I shall be happy to send you the balance of my knowledge, on the subject, if any there be, on demand. I

have omitted all mention of *evergreens*, for screens and hedges, and perhaps we may have a talk on that subject, when the thermometer rises above zero, should any such good time come.

Your friend,
H. F. FRENCH.
Exeter, Feb. 4, 1852.

P. S. As a protection while a hedge is growing, or to strengthen the weaker kinds of hedges, two or three No. 9 wires may be drawn through them, attached to strong posts of wood or stone, at each end, with an occasional post of *tire iron*, between, set in stone blocks even with the ground. This is not expensive, and will stop any cattle, and the wires will not be seen.

AGRICULTURAL.

"Nathan, where is the shovel! Here I've been hunting long enough to do my work twice over, and can't find the shovel."

The farmer was wroth.

"I don't know where 'tis, father; *summers* about, I suppose."

The two joined in the search.

"Nathan, you have left the shovel where you have worked, I know. Why don't you always put the tools in their places?"

"Where is the place for the shovel, I should like to know, father?"

He could not tell. It had no place. Sometimes it was laid in the wagon, and occasionally accompanied that vehicle when harnessed in a hurry. Sometimes it was hung up with the harness, to fall down when not wanted, or get covered up when it was. A great deal of shoe-leather had come to naught by that shovel. It had at times more than the obliviousness of Sir John Franklin, and defied discovery. So it was with all the other tools. They would seem to vanish at times, and then come to light rusty as old anchors.

The farmer's barn was crowded. He had no "spare room" there. There were several in his dwelling. But the barn was always crammed—it was a kind of mammoth sausage—stuffed every year. So there was no room for a special apartment for the tools. In his imagination he never saw his hoes hung on a long cleat, his chains all regular in a row, his rakes and his long forks overhead; certainly he was never anxious for such a convenient room.

Why?

His father never had a tool-house, and his father was called a good farmer.

So he was, then—in his day—but there are better husbandmen now, let me say, and I desire to shock no one's veneration.

Did they find the shovel? No! they might as well have searched for the philosopher's stone, seemingly. Nathan started for Mr. Goodman's to borrow one. Their work *must* be done, and borrow he must.

"I don't know as you can find one in my tool-house," replied Mr. Goodman.

Nathan noticed that he bore down on some of his words like a man on a plowbeam. Didn't he mean something? Nathan went to the tool-room thoughtfully. A door on wheels opened with a slight push, and there were Goodman's tools—enough, Nathan thought, to equip a company of Sappers and Miners! Hatchets, axes, saws, tree-scrappers, grafting tools, hoes, diggers, shovels,

spades, pick-axes, crow-bars; plows, harrows, cultivators, seed-sowers; sieves, trowels, rakes, pitch-forks, flails, chains, yokes, muzzles, ropes, crow-twine, baskets, measures,—all were there, neatly and compactly arranged. It was Goodman's *ark*—to save him from the *deluge* of unthrift!—Here every night the tools were brought in and wiped clean and hung up in their places. The next morning a job could be commenced at once. Goodman knew. He partitioned off a large room in his new barn for tools. It was central and easy of access. It was a pleasant place for a visitor; the tools were the best of their kind. Every new shovel or rake, or fork, before used, was well oiled with linseed oil, which left the wood smooth and impervious to water. Goodman frequently says, 'I had rather have the few hundred dollars I have spent for tools so invested than the same in railroad stock. It pays better.'

Now there is no patent on Goodman's plan, and I hope many will go into it:—the more "successful imitations" the better.—B.—Concord, Mass., Feb. 3, 1852.—Commonwealth.

OIL FROM ROSIN.

The idea of producing oil from a substance like rosin, seems at first strange; and before chemistry had disclosed to us the compound nature of bodies, would have been deemed nearly as chimerical as that of the transmutation of metals, held by the old alchemists. But the thing is done. A few days since, we were invited by Mr. L. Maynard, one of the directors of the Boston Oil Company, to visit their works at South Boston. The business of this company is the manufacture of oil from rosin, which was commenced in June, 1851. Three distinct articles are obtained from the raw material, viz.: spirits of turpentine, oil and pitch—the latter the residuum at the close of the process. The oil, which is the primary object, consists of three kinds, which are variously adapted to machinery, currying leather, and the preparation of paints. We are assured that all these are of superior quality for their respective purposes; that leather for which the oil was used in the currying process, has been made into boots and shoes and found to do as good service as that produced by the old mode; that for harnesses, and all the ordinary applications of oil to leather, is unsurpassed; that the kind prepared for machinery is preferred to the best sperm oil—the cost of the former being only eighty-five cents per gallon, while that of the latter is one dollar and thirty cents. A certificate has been given by Wm. M. Ellis, Chief Engineer of the U. S. Navy Yard at Washington, stating that he has subjected this oil to the most careful tests, and that he finds it fully equal, if not superior, to the best oils that have been used in that yard—viz.: winter-strained sperm, and pure neat's foot oil. He states that on bearings or journals running at high velocities, "there is not the slightest appearance of the formation of gum, and the oil appears to be better diffused and to remain much longer on the bearings than the sperm oil." Mr. Souther, of South Boston, gives similar testimony, and states that one application daily of the "Boston Oil," keeps his machinery in better order than two applications of sperm oil.

It is a beautiful article, without any disagreeable taste or smell. The process of manufacturing

was invented by Louis S. Robbins, of New York, by whom a patent of it has been secured.—*Boston Cultivator*.

For the New England Farmer.

KEEPING FRUIT—INQUIRIES.

MR. EDITOR:—Having had no experience in testing the various modes of keeping fruit, I wish to obtain your advice in regard to the situation of a fruit (a.) cellar; whether you would give it a northern or a southern exposure. I have in my orchard a small hill, on three sides of which I can situate a cellar and get a convenient outside door. Which of the three would you advise me to use expressly for fruit? I am about two miles from Lake Ontario, and we are subject to much wind from the west; and in airing the cellar on the west, may I expose the fruit to frost. Will there be any advantage derived by building a hollow wall? I have now about forty acres of orcharding and mostly spring fruit, and I should like to be able to keep it till spring. Any suggestion you may be pleased to make in regard to the accomplishment of that object, will be most gratefully received.

I design to put out about a thousand dwarf pears in the spring, and the White Doyenne (b.) being a favorite pear in New York, I have thought, on that account, I should like to cultivate them if they will do well on the quince. I would ask also if the Bartlett (c.) will do as well on the quince? I have about forty growing on the pear stock, and have been induced to think they were not very hardy in this locality. I do not like yet to give them up. Yours, respectfully,

W. H. ROGERS.

Putneyville, Wayne Co., N. Y.

REMARKS.—(a.) Apples keep best in a cool, damp cellar. In a recent conversation with Mr. E. W. BULL, of Concord, in this State, one of the most intelligent cultivators of fruit among us, and whose accuracy in horticultural matters is refreshing, he said he had found apples perfectly sound in his cellar long after their usual season, although water had constantly stood in the drain, which was one foot deep, near the wall, all around the cellar—the soil being a heavy loam. In another cellar which he occupied, the earth being a dry, sandy loam, all kinds of fruits and vegetables decayed early.

A double wall in a fruit cellar is hardly necessary. A large cellar under a building—damp, but not wet, and furnished with ventilating tubes to admit the cold air when necessary, so as to keep the cellar nearly down to the freezing point, would keep fruit better than any other place, excepting, possibly, an ice-house, which it would nearly resemble.

With regard to the aspect of a cellar, we should prefer an eastern or northern exposure; and double doors, that is, two doors two or three feet apart, would be of great service in preventing an access of air in the warm season.

From the fact that apples have been kept two years in a sound state by packing in plaster, there-

by wholly excluding the air, it would not seem to be necessary to ventilate the cellar for any other purpose than to regulate the temperature.

(b.) The White Doyenne pear, we believe, does well on the quince, in all locations. It does well on the pear in New York, on the testimony of Mr. Downing—which is good authority.

(c.) The Bartlett does not succeed perfectly here on the quince. On its own roots it is sometimes tender, though a great grower. It would probably do best grafted on full grown trees of hardy and vigorous habit. Treated thus, they have proved hardy in localities where they could not otherwise be grown.

For the New England Farmer.

AGRICULTURAL LECTURES.

The public has already been apprized that a course of lectures would be given at Albany, the present winter, on sciences connected with Agriculture. The lectures, which are given by professors in the University, commenced on the 13th of January, under favorable circumstances. A class of some thirty-six young men from various parts of the State are in attendance, and if they do not return to their homes at the close of the term, viewing the farmers' profession in a new and enviable light,—fairly in love with its beauties, it will be no fault of those who teach.

And supposing they do go home altogether wiser than they were, who will for a moment suppose but that the knowledge they gain will turn to so practical an account, that its benefits will show themselves before another winter will whiten the fields with snow? The consequence will be, they will be anxious next winter to return to the fountain whence they were refreshed, and a host of others seeing the thing is no humbug, will be anxious to go with them.

And so the State of New York has set a new ball in motion for the benefit of farmers, by opening facilities for them to acquire the knowledge which the complicated nature of their calling so vigorously demands. And this ball will roll on, propelled by the enterprise of her citizens, until its influence will be universal through the State.

An experimental farm will probably be secured the present season, where practice will illustrate the beauties of science for the benefit of her sons; and in truth, we believe that at no distant day, she will have at least one experimental farm, in each senatorial district, fully equipped with its teachers and all the paraphernalia necessary to its success. Surely New York is a great State. Great in her territory, vast in her resources, but greatest of all in the expansive views and enlightened liberality of her sons.

Where is our agricultural school in Massachusetts? Fifteen months ago we had one in prospect with much more certainty than the State of New York. The able report of the commissioners on the subject fully explains the utility of the thing. Many in different parts of the State were anxious to see the experiment in a way of solution. But when shall we see it? EVERLYN.

¶ No man has ever regretted that he was virtuous and honest in his youth.

For the New England Farmer.

THE BALDWIN AND DANVERS SWEET.

MR. EDITOR:—Mr. FOWLER, in his remarks upon apple trees in a late paper, speaks with distinctness, of those excellent varieties, the Baldwin, and the Danvers Sweet. Of these, Massachusetts has great reason to be proud, as they are, all things considered, among the varieties most worthy of cultivation.

In speaking of these, there is danger of confusion as to their original locality. Mr. F. says, that a monument has been erected at Somerville, where the Baldwin was first discovered. Is this so? I had always understood that the Baldwin was first brought into notice by the late Col. Baldwin, of Woburn, father of Loammi Baldwin, the eminent civil engineer; and that it was found by him in the town of Burlington, adjoining Woburn. I have heard those speak of this fact who said, they had seen the original tree in bearing condition. Possibly, it may have been otherwise, but quite certain am I that such has been the tradition. If Mr. F. has seen the *monument*, of which he speaks, and can show it with an unmistakable inscription thereon, I shall be satisfied. You, sir, who have your home in the country that gave birth to the Baldwin, are called on to define its precise locality. It is no less important to the grower of fruit to know this than it was in olden time to determine what city should have the credit of producing a Homer.

As to the Danvers Sweet, we know the town and the farm on which it originated. I have been familiar with it from my earliest years. It was owned by Daniel Eppes, Esq., at the time of the discovery of the tree from which so many good apples have proceeded, and which now continue to refresh all lovers of *apples and milk*, (thaa which few better dishes can be found.) This apple holds its original character with great distinctness. It has not the variety of shades that mark the Baldwin—it is unmistakable. Perhaps, like all other fruits, modified somewhat by the strength of the soil, or exposure to the sun; for all fruits are benefited by a fair exposure to light and heat, as well as the animal creation. How far these fruits have been, or are liable to be modified by the stocks on which they are *budded* or *engrafted*, is an inquiry beyond my power to answer. If the stock does not have some influence on the quality of the fruit, I should think it very strange—but that it does, I am not prepared to assert. If it does, then we can never be certain of continuing any particular variety of apple for any considerable length of time. It would seem from Mr. F.'s observations, who resides near where Gov. Endicott's orchard was, and where his *pear tree* now is, that there still remains *one variety* of apple that was cultivated by the governor. I have seen the apple; it has nothing of aristocratic character, but the fact that it came from the governor's orchard. There is one other apple that originated on the same farm with the Danvers Sweet, but little known to fame, commonly called a *fall-harvey*, little less worthy of celebrity. Wherever known, at the time of its maturity, it has a preference to most other apples for table use. I remember to have seen in the mill of one of the largest farmers of this place, who died about *one hundred years* since, that a *bushel of Harvey apples* should annually be given to his wife so long as she remained

his widow. Presuming, I suppose, if she married again, that her husband would supply her with *good apples*, as well as other comforts. P.

Danvers, Feb. 8th, 1852.

REMARKS.—The question is still unsettled as to where the Baldwin originated. Cole's Fruit Book says "Wilmington and Tewksbury seem to have an equal claim to its origin." Some further notice will be taken of it at another time.

VARIETY IN OCCUPATIONS.

One of the broad marks of distinction between this and other countries, is found in the readiness with which our citizens adapt themselves to changing circumstances. The fact that we can *turn our hands to anything*, gives full assurance of permanent prosperity and independence. It results mostly, perhaps, from education. In England a seven years' apprenticeship is required, before one is allowed to exercise a trade, and this arbitrary requirement, tending, as it does, to keep men in ignorance of every thing but this one occupation, holds them in a sort of bondage.

He who knows only how to *weave*, must, of necessity, be the dependent of the owner of the *loom*; and he who knows only how to use the spade, has ever been the serf of him who owned the soil. The *spirit of unrest* with which we Yankees seem inspired, has doubtless been, in some respects, productive of evil. It has drained New England of many of her enterprising sons, who might have remained at home, and by a more thorough cultivation of her soil, gained the comforts and luxuries of life which they have in vain sought, in their pursuit of the *setting sun*. Cooper, in one of his novels, says, "The prospect of Heaven itself would have no charms for an American of the backwoods, if he thought there was any place *farther West*."

Still, the consciousness, that the world is open to him, to go *where* he pleases, and *do what* he pleases, for a business, gives strength and manliness to the character of the American.

The idea is fast becoming obsolete, that a man has capacity but for one pursuit. It has been ascertained that intense application to one study, or constant straining of the mind in one direction, like the continued exertion of one set of muscles is injurious to the whole system. This is true of scientific pursuits, as is well illustrated by the case of one of our own countrymen, who recently became deranged, upon the discovery of a new method of taking the longitudes. His mind had been overtasked, and lost its balance, at the moment of success.

It is true of mercantile pursuits. A counting-house clerk, or merchant, who has no other object of interest than his books and ledgers, becomes a *one-sided man*, a man of dollars and cents, who, to use the language of another, "can see nothing very

beautiful that is not at the same time very lucrative."

The true remedy for these difficulties is to mix up a little *farming* with your other affairs. Have your dwelling a few miles from the city, and take fresh air and exercise instead of medicine. In the country, especially, every man should have land, and be interested in its culture, not as a matter of pecuniary profit to himself, but for his health of body and mind; and for the advantage of those around him. Some of the best farmers in New England have been among professional men. The old order of ministers were all farmers, and furnished their parishes the best examples of systematic and scientific husbandry, and the best illustration that *intellectual culture tends always to promote the best culture of the soil.*

They were in advance of the people, as well in the science of husbandry, as in general attainments in learning, and their daily life of mingled physical and mental labor, their quiet and unselfish *living out* the pure principles of the Gospel, were sermons more powerful for good, than the speculative Sunday discourses of some of their successors, who are in a more literal sense "set apart to minister in holy things." In the days of political trials no purer or readier patriots were found, than they who labored through the week on the lands of the Parsonage. The country *physician* is always a farmer, and usually scientific and successful. His studies lead to a knowledge of chemistry and of the laws of animal and vegetable life, and give him a taste for agricultural pursuits. Many of our *lawyers* of the first rank, are rendering valuable aid to our cause. The present Secretary of State has done good service to his country on his farm in Marshfield, and his home in Salisbury in the Granite State.

Indeed, there is room enough in the business for all, and often he who pursues it, not as his principal employment, but as an amusement, may, by strict scientific investigation, and by experiment which may result, to him, in pecuniary loss, make his recreation of substantial benefit to his fellow-men.

ACKNOWLEDGMENTS.

PEARS.—Pears from "H. H. W.," Lowell, are of fine flavor, and we should think well worthy of cultivation. The specimens sent were too much bruised and discolored to afford any fair opportunity of fixing a name for them. If you will send a specimen on a twig of the tree with leaves, we shall be able to say whether it belongs to any of the varieties now among us.

APPLES.—The large, green, beetle-headed apple from friend SHELDON would make an excellent substitute for the pumpkin to be fed to stock.

The smaller apples with a beautiful blush on one side are undoubtedly the *Tolman Sweet*. It is very productive, but not remarkably rich to our

taste. There are plenty of varieties much better than this.

FARMING IN OREGON.

The following extract from a private letter, giving some account of the Agricultural capacities of Oregon, we copy from the *New Bedford Mercury*:—

TUALATIN PLAINS, (Oregon,) }
Nov. 23, 1851. }

Oregon is an extensive farming country, with a rich and fertile soil; the climate,—so far as my experience has extended,—is one of the most healthy in the world. I have not been sick, even for a day, since my arrival here, and I know of hundreds of others whose health is equally as good. The large and extensive prairies are interspersed with timber sufficient for fuel, fencing and building purposes.

The wheat grown here is superior to that raised in any other part of the United States; it never rusts, and it is not troubled by insects. Wheat yields from 25 to 50 bushels; Oats from 30 to 40, and Potatoes from 150 to 400 bushels per acre. Oats are now selling for \$1, Wheat for \$1.50, and Potatoes for \$1 per bushel.

We raise what is here termed two "voluntary crops." The land is prepared and sown in the fall, and the next summer it is harvested, and the grain scattered in harvesting will seed the same field for the two succeeding years.

The largest proportion of the population here is from the Western States, and they are far behind our Yankee farmers in the science of tilling the land. The climate is much warmer here than in New England; grass is now some six inches high, and strawberries in full bloom; in fact some few ripe ones have been gathered. All kinds of mechanical labor is in good demand, and a few wheelwrights, carpenters and blacksmiths, would find constant employment and high wages. If you have any unmarried ladies within the circle of your acquaintance, just tell them to make tracks for Oregon; it is the place for them—they may be sure of an offer of marriage as soon as they arrive. If they accept, they will find loving husbands, and a happy and comfortable home; if not, they will find constant employment at from \$30 to \$50 a month, and boarded at that. It is the place for Yankee girls—*God bless them!* I could find husbands, and good ones, too, for fifty in as many minutes.

MEASUREMENT OF IRISH POTATOES.—The *Leonardtown* (Md.) *Beacon* urges that the Legislature should pass a law regulating the measurement of Irish potatoes. The practice now is to heap the half bushel as long as the potatoes can be piled up, or to measure them in a flour barrel, heaping the barrel and allowing it to hold two and a half bushels. This, the *Beacon* contends, is doing great injustice to the farmer. In fact, it says it is robbing him of at least one-fifth of his just due, or one bushel of potatoes out of every five.

REMARKS.—Potatoes should be bought and sold by *weight*, as should all the grains and meal. Purchasers of potatoes "by the small," as they say at the South, pay extravagant prices for them. The price is as easily regulated by the pound as by the bushel.

APPLE TREE PLANTED BY PEREGRINE WHITE.

Peregrine White, the first English child born in New England, lived in the eastern extremity of Marshfield, where also he died, in 1704, at the age of 83. His farm is still in possession of a descendant of the fifth generation, by the same name. On these premises stands the celebrated tree represented in our engraving. Tradition says it was planted about the year 1648. The writer recently visited it, and found only the right hand branch standing; this appears to be a vigorous shoot from the old stock; the residue of the tree, being partially decayed, has been removed. The owner states that, as far as his memory extends, the tree has produced fruit almost every year without interruption. The apples have a superior flavor, being a pleasant sour, and of a beautiful red color. When perfectly ripe we have rarely ate a better apple.

Would the reader secure the blessing of coming generations, let him plant a tree.

We are enabled to present the above interesting engraving and description, through the kindness of Messrs. STONE & PRATT, proprietors of the *Mother's Assistant and Young Lady's Friend*, a work which we have read for many years with interest and profit.

Everything that relates to the Pilgrims, their

immediate descendants, or the times in which they lived, is still attractive to the people of all parts of the country. This tree is now over 200 years old.

THIRD AGRICULTURAL MEETING,

AT THE STATE HOUSE, JAN. 27, 1852.

SUBJECT FOR DISCUSSION—*Plowing and Kindred Operations.*

At the meeting on Tuesday evening, His Excellency Gov. BOUTWELL presided, and on taking the chair made a few remarks upon the influence of the occupation of farming on the health and life of those engaged in it. He said a system relating to registrative returns would be calculated to give the agricultural interests of the State more confidence so far as regards pecuniary advantages and moral and physical health. Individuals engaged in mercantile or mechanical pursuits may gain more money, but put life to life, and take into consideration health and longevity, and the farmer in reality receives as much compensation for his labor as any other class. These are facts well-established, and they give additional importance to his pursuits.

The discussion of the subject before the meeting was commenced by Mr. PROCTOR, of Danvers. It lies, he said, at the foundation of all agricultural improvements, and as it is the first of operations on the farm, so it would be found to be most im-

portant; one with which every person working upon a farm must have more or less acquaintance, and which but few fully understand. He was confident that the more any man investigated the subject, the less confident would he be in his knowledge in regard to it—the more would he find to be learned respecting it. He was satisfied that there is great room for improvement as respects the ordinary practice of this department of husbandry. As ordinarily practised it is found quite too shallow, and he would suggest that every farmer may find upon his own farm a demonstration of this fact. Take the garden spot which is prepared with special reference to securing a much larger yield than is expected from the ordinary field, by increased and deeper pulverization. The farmer expects as a result of this extra labor, to raise from two to three times as much as from the same amount of ground in his ordinary field, and expects it because of the better preparation of the ground. If he would apply the same preparation to his fields he might double his crops. The complete pulverization of the soil is the essential consideration for good culture. This practice we learn from other countries—from England and from Holland. The great crops there obtained are the result of perfect pulverization. Gardeners in this country who raise vegetable products have realized from one to two and even three hundred dollars an acre net, mainly from perfect cultivation. Here he mentioned a fact which came under his own observation in Beverly, in Essex County, where a practical man named Mason, raised on a two-and-a-half acre lot, 18,000 cabbages per acre, the net receipts for which averaged \$450 an acre. This was done by extra care in cultivation, and the use of a compost manure of his own manufacture.

There were, he said, many things in connection with plowing which might be suggested, which are not now fully understood. First—what width shall be given the furrow-slice? Of late, the tendency has been to make it as wide as possible in order to save time; and this tendency has increased sometimes until it is made from 14 to 16 and 18 inches wide. In this way the land could be plowed soonest, but would it be the best manner? He thought not. The furrow-slice should be made as wide as can be turned completely over and made to lay flat, and no wider. With a furrow 8 inches in depth, 10 inches in width would be sufficient—or at the extent, twelve inches in width. Another point is—how shall the furrow be laid—flat or set on edge, at an angle of 45 degrees? This would depend upon what the land is to be used for—if for grass, it would be better to have it flat. If it is to be broken in pieces so that the air may penetrate it, it would be better to set it partly on edge. So it is not in our power to lay down any rule, except in connection with the use to which the land is to be applied. An-

other question is, what kind of a team is it the most profitable to use? Here a great variety of opinions exist. In Worcester county, the published opinion is in favor of one pair of cattle only, without a driver—and only this kind of team is encouraged at the plowing matches. Such, however, is not the practice throughout the county, or in other counties. In most counties where they plow grass lands to the depth of 8 or 9 inches (and it should never be less than that) they use at least two pair of cattle. Many use one pair and a horse. So far as he had any opinion upon the subject, he thought the best team was a horse and a yoke of cattle, or two pair of cattle. The additional power which this team possesses, he believed was better applied in deepening the furrow than to be omitted. A horse and one yoke of oxen might be trained to be driven by the plowman, and thus the expense of a driver saved; but with two pairs of cattle this is seldom done.

Mr. PROCTOR, in conclusion, alluded to the kind of plow used as another important consideration. The "Michigan Sod and Subsoil Plow" he recommended very highly. It is so constructed as to turn two furrows at the same time. The theory is to lay the sod to the depth of three inches, perfectly flat, and then turn up some five inches of earth upon it. This he had seen done to perfection in a furrow 8 inches deep and 10 inches wide. It is guided with more ease than the ordinary plow, because it balances itself. In regard to the amount of power required to operate it—he had seen it fairly tested with a dynamometer, and the result was that it was drawn without any additional power than was necessary to operate a plow cutting a single furrow. A practical farmer who had used it, told him that he considered land operated on one year by this plow, as well fitted for the seed as land operated on two years by the ordinary plow. If this is so, the matter is worthy the attention of farmers.

Mr. B. V. FRENCH, of Braintree, next addressed the meeting strongly in favor of the complete disintegration or pulverization of the soil. First, he asked, what are we to gain by this, over the common methods of culture? In his first efforts at orcharding, he remarked in the hearing of an able gardener that with two men he had set out one hundred apple trees in a day. The gardener looked astonished, and said, why, I set out ten trees in a day with eight men and worked hard at that. My trees, said Mr. French, cost me about two cents apiece to set them, and his cost him about eighty cents. His trees were trenched two feet in depth and ten feet in diameter. Some time afterwards Mr. French went to see these trees and was satisfied that the gardener's husbandry was the best. He also alluded to some very extra pears, which he saw in New York State, and which gained their superior quality by deep trenching the

ground. A cane could be run down into it, its whole length. A gentleman who recently visited some of the prominent gardens in the vicinity of London, writes that they are trenched four feet deep and that 16 cords of manure are applied to the acre. An English gentleman recently in this country, stated that our farmers do not plow enough—they manure higher than English farmers do, but they don't plow deep enough. In regard to subsoil plowing, there is a mistake prevalent in the community. Some think if they plow once, the work is all done. They should bear in mind that they have but just moved the earth and not brought it up. If it is on the sod it is best that they should not bring up the subsoil the first year. The next year they may bring up one or two inches—and so on each year until they get down 18 or 20 inches. The most thorough mode of pulverizing the soil is by trenching. Of the expense of this he had made a calculation, the result of which was, that it would cost \$100 an acre, to trench it two feet deep, and this he believed would be in the end more economical than the ordinary mode of plowing. Persons would be surprised to see to what depth the small fibrous roots of plants descend. He believed that at 62 1-2 cents a rod, (or \$100 an acre) most any land might be trenched, and that it would be a good investment. In regard to the time of plowing—he thought the land should be tolerably dry before plowing is commenced. If not, the land becomes caked. The best time he had found, was, to take off the hay one day, and plough the land the next. This would be sure death to all vegetable matter. Compost might then be applied with a little bone, and salt to kill the worms, and then a good crop of turnips for cattle might be gathered. In conclusion, he spoke highly of the operations of the Michigan subsoil plough.

Mr. BROWN, editor of the *New England Farmer*, hoped that some gentleman thoroughly acquainted with the practical operations of the farm, would express an opinion upon the question of frequent plowing, whether it was advisable or otherwise. A diversity of opinions exist on this point, and the knowledge gained by those who have made experiments, should be made public. If land can be made fertile by frequent plowings, it may be better to resort to this practice, than to purchase special manures.

Mr. BROOKS, of Princeton, spoke of plowing as a useful and necessary operation, and said the question was, under what circumstances shall we plow shallow or plow deep? His own opinion is that the operation of plowing is one of exhaustion—that the more frequently land is plowed, the more it is exhausted. If he had a virgin soil which produced a new crop, he should plow it shallow, because if he threw up too much of the fructifying substances,—more than was required

by the crop, they would be lost. When that was exhausted, he would plow deeper, but would not descend too fast. It would be better to apply a little more manure. He had no doubt a larger crop might be got by deep plowing, but it would be a money losing operation in the end. In regard to the furrow-slice, no theory applicable to all cases could be given. On dry land where he plowed shallow, he should lay it flat, because the sod laying flat upon the earth, would become more moist—the water of attraction would rise up and the rain run down more readily.

In a moderately moist soil he would lay it at an angle of 45 degrees; in a very wet soil he would lay it edgewise. The philosophy of subsoiling he understood to be that it deepens the soil, and allows the rain to descend more easily; and also the water of attraction to rise more readily. He did not understand how subsoiling could make land moist in dry times, and dry in wet times. Subsoiling on dry land he considered injurious. It may be useful on some poor sandy plains, such as he had seen in New Hampshire, where the soil was a sandy loam based upon a hard pan. In such cases it might be used to advantage, as it would turn up saline substances which are not in the soil. By trenching, large crops might be raised, but it is a forcing operation, and is it on the whole lasting and profitable? This is the main question. Can it be done broadcast through the land? He thought not. He thought the Michigan plow might be useful; still it is not good policy to turn up too much of the subsoil. He thought it would be a better course to drain the land. The depth to which land should be plowed, and also the kind of plow and team to be used, would depend very much upon the character of the soil to be operated upon.

Mr. HUBBARD, of Sunderland, dissented from some of the views of Mr. Brooks. There was nothing incompatible in the theory that subsoiling would aid a crop in a dry time, and at the same time be beneficial in a wet time. When the soil is loosened to the depth of two feet, the rain which, after a shower, would stand upon the earth if it was not thus stirred, is absorbed and sinks out of the reach of the plants, while, if it remained on or near the surface, it might damage them. And then in a dry time by the same principle—that of capillary attraction—it hastens to escape to the surface. Before the hard pan was broken, the water would have great difficulty to permeate through it. It would operate like a cast iron floor, and might detain the water so long as to injure the plant. And so again, when the surface of the earth is parched by the sun, the hard pan, if unbroken, would prevent the roots of the plant from drawing moisture from the soil beneath.

[Mr. Brooks here suggested, that if the water descended into the earth it must come back by at-

traction, and under the influence of evaporation, producing cold and injuring the plants.]

Mr. HUBBARD illustrated his point in this manner. Take a sponge and dip one end in a dish of water—by the power of capillary attraction the water will soon rise above the water in the dish and fill the sponge. The sun rises and shines upon the sponge and the top becomes dry by evaporation, still, by the power of this principle a portion of the sponge is kept damp. When the sun goes down the water comes up and wets the whole sponge again. So if the land is not broken below six inches there will be no water there, and in consequence, in a few days the plants will cry out for water; but if the subsoil is broken up there will be a reservoir there which will last these plants many days. Mr. Hubbard approved of trenching for fruit trees, and thought it might be used to great advantage. He was also in favor of frequent plowing—and mentioned the experience of the President of the Hampshire County Agricultural Society, who by simply plowing and re-plowing and sowing a few seeds of clover, had brought land very much reduced into good bearing condition. Land that cost him \$10 an acre, prepared in this way, he could rent more readily than good meadow land worth \$150 an acre.

In conclusion, Mr. Hubbard alluded to the constituents of plants, 90-100ths of which he said were organic, and 10-100ths inorganic. The inorganic are all volatile, and are flying about in the atmosphere in the shape of gases. By plowing, these elements are absorbed and put in a condition to unite with the plant and give it substance, and at the same time the land is restored to a condition of health, and made capable of supporting vegetable life.

Mr. WALKER suggested as another reason in favor of subsoiling, the theory of Professor MAPES, that by stirring the soil the circulation of the air through the soil is increased. All the vapor in the atmosphere is condensed as it passes through the soil, and as it becomes dry comes out of the ground, and other air goes in.

Mr. BROOKS, in allusion to Mr. Hubbard's remarks respecting the improvement of poor land by plowing, thought that in the case mentioned quite as much benefit resulted from turning in the clover as from the plowing. He had manured his land by plowing in clover crops. In regard to manuring the land as suggested by Mr. Walker, he did not think his theory was based upon good philosophy. It was not good philosophy to say that the same air would descend into the earth and displace the cold air. It would be found a fact that where water stands on a meadow, at two feet below the surface, the water would be colder than the water on the top.

Mr. WILDER, of Dorchester, agreed in all that had been said in favor of a complete pulveriza-

tion of the earth by subsoiling and trenching. But whether it was best to trench at an expense of \$100 an acre must be determined by the location of the land. He was in favor of frequent plowing, and also spoke warmly in favor of the Michigan plow. It turns up those substances which become the food for plants. An experiment made with this plow resulted in getting from an acre of land which previously bore but 15 bushels of grain, a crop of 55 bushels.

Mr. HOWARD, editor of the *Boston Cultivator*, was called upon to give some statements in regard to an examination of the Michigan plow, which was made at Albany some year or two since. He said the committee did not recommend the plow for general use, but for certain special uses—first, for a hard, stiff soil, where the substances comprising the nutriment for plants were found at a great depth: the other was, as a substitute for trenching or plowing where vegetable fertility was contained to an unknown depth, and which, when brought up, will produce as good a crop as the top soil itself. Subsequent experience had been in accordance with the views taken by the committee at that time.

In regard to the subject which had been discussed during the evening, it was quite obvious that gentlemen viewed it from different points, and therefore came to different conclusions. The rules for plowing would have to be varied according to the composition and texture of the soil to be worked. In regard to subsoiling, it had been thought a mystery how it could prove a protection against both rain and drought. It is evident that plants suffer most from drought in dry, tenacious soils, and if by drainage, or deep plowing, the soil can be kept open, its absorbent powers are greater, and it attracts more moisture from the atmosphere or more from below, as the case may require.

The subject for the next meeting was announced as—*Agricultural Education and the Improvement of Agriculture*.

¶ We learn from the *Agricultural Journal*, published at Montreal, that the British government has granted \$20,000 for the establishment of a Model School and Farm near Limerick, Ireland, and that similar schools and Model Farms are being established in every county in Ireland, and are reported to be doing a vast amount of benefit to the country.

Let us profit by these timely hints, and start one at least and see how it works.

¶ With the Editor of the *Agricultural Journal*, Montreal, be kind enough to send us whatever publications have been made in relation to the *Model Farm at La Tortue*; but particularly the plan of Mr. Ossaye for the management of the farm.

THE OLD FARMER'S ELEGY.

BY JOSIAH D. CANNING.

On a green, grassy knoll, by the banks of the brook,
That so long and so often has watered his flock,
The old farmer rests in his long and last sleep,
While the waters a low, lapsing lullaby keep.
He has plowed his last furrow, has reaped his last grain;
No morn shall awake him to labor again.

Yon tree, that with fragrance is filling the air,
So rich with its blossoms, so thrifty and fair,
By his own hand was planted; and well did he say,
It would live when its planter had mouldered away.

There's the well that he dug, with its waters so cold,
With its wet dripping bucket, so mossy and old,
No more from its depths by the patriarch drawn,
For "the pitcher is broken," the old man is gone.

'Twas a gloom-giving day, when the old farmer died;
The stout-hearted moaned, the affectionate cried;
And the prayers of the just for his rest did ascend,
For they all lost a brother, a man and a friend.

For upright and honest the old farmer was;
His God he revered, he respected the laws;
Though fameless he lived, he has gone where his worth
Will outshine, like pure gold, all the dross of this earth;
He has plowed his last furrow, has reaped his last grain;
No morn shall awake him to labor again.

AGRICULTURE—STATISTICS.

BY HON. EDMUND BURKE.

In pursuing this branch of my subject it is only necessary to add, that after man had resorted to agriculture as the best and surest means of supplying his wants and necessities, the great art from that time continued to improve and progress until it has arrived at its present state of perfection and importance. In all ages and in all nations it has been regarded as the greatest and most important of all the avocations in which man can engage. It has ever been the most essential interest of every community that has emerged from the hunting and pastoral state. It has employed more of the people, and more of the capitol, of every nation sufficiently civilized to practice the art of agriculture, than any other avocation or pursuit. It is the foster mother of manufactures and commerce. It supplies the raw material to one, and a large proportion of the subjects, or articles of exchange, to the other. We hear much of the importance of manufactures, of commerce, of banks, and corporations and the like. The public press teems with paragraphs, essays and disquisitions in relation to those interests. The halls of legislation re-echo with the clamors of their advocates. They clamor for the favor and protection of the government. They are distressed and demand relief. They are pinched for money, become frightened, and are afflicted with *panics*. If we may believe the public press, they are in just such a quandary now. And from the noise, clamor, distress, and panic with which those interests are afflicted every few years, the public mind has become impressed with the idea that those interests are indeed greater, more important, and more essential to the well-being of the country than agriculture; because agriculture is patient, quiet, and makes no complaint. Yet, the actual fact is, that all those interests combined,—manufactures, commerce and corporations,—are in no respect so vast, nor so important and essential to the welfare of the country, as agriculture. All

of them combined do not employ so much capital, nor so large a number of the people of any civilized community, as agriculture. To establish this proposition, I will refer to a few facts which I find in the economical history of the three most productive and wealthy nations of modern times, I mean Great Britain, France, and the United States.

The statistics of our own country furnish similar results. Owing to some cause or other, we have not been able yet to see the results of the census of 1850. In 1840, according to the estimate of Professor Tucker, the annual value of the products of agriculture was \$654,387,597. Annual value of the products of manufactures and the mechanic arts \$239,836,224; or less than one-half the amount produced by agriculture. At the present time, the annual value of agricultural products cannot be less than \$1,000,000,000, while that of manufactures will not exceed \$400,000,000. The capital invested in agriculture, in the United States, at the present time, will probably amount to about \$6,000,000,000, while that invested in manufactures will not exceed \$500,000,000. According to the census of 1840, the whole number of persons employed as laborers in agriculture was 3,710,607, while the whole number employed in manufactures and the mechanic arts of all kinds amounted only to 791,545. Thus, in the United States, as well as in Great Britain and France, the great preponderating interest is agriculture. In all the countries which I have named, it is greater than all other interests combined, whether we regard the amount of capital invested, the value of its annual products, and the number of persons employed in, and dependent upon it. And in this country, if we could obtain even an approximation to the actual facts, we should find the agricultural interests greater in proportion to all other interests, than in England and France, inasmuch as the United States is pre-eminently an agricultural country.

I allude to these facts, not because I would disparage the great interest of manufactures and commerce; but, on the contrary, I refer to them and institute the comparison between them and agriculture which I have, only for the purpose of showing that the latter is the great predominating interest of all nations, and of impressing upon the minds of all who hear me, a correct and truthful idea of its transcendent importance, and of the high responsibility, dignity, and honor of the occupation of an agriculturist.—*Burke's Address at Unity, N. H.*

NATIONAL AGRICULTURAL SOCIETY.

The Pennsylvania State Agricultural Society, at its recent annual meeting, adopted a preamble and series of resolutions setting forth the great importance of the formation of a National Agricultural Society, and proposing the calling of a National Convention of Agriculturists at Washington, for the purpose of taking the initiative steps in the organization of a National Society. The following resolution will explain the means in which the friends of the measure are invited to co-operate, in carrying forward the project:—

Resolved, That all States or State societies willing to co-operate with us in this laudable enterprise are requested to inform the President of this Society of such fact; and so soon as five States

have so signified their willingness to act in the matter, then the President of this Society shall immediately, after ascertaining (by corresponding with the several State Societies upon the subject) the most suitable time for calling such Convention, fix on a time for the meeting of said Convention, of which he shall give notice in as many papers as may be necessary.

For the New England Farmer.

A MODEL FARM SCHOOL.

BY HENRY F. FRENCH.

The necessity of a better cultivation of the land in New England, is generally conceded, and all are agreed that more *knowledge* of the principles, as well as of the practical operations, of Husbandry, is the one thing wanting. We see one man raising fifty bushels of corn to the acre, while his neighbors raise but thirty. We see another raising thirty or forty bushels of winter wheat to the acre, while others fail to raise any. We see one man's apple trees bending under the weight of their fruit, yielding an annual income of *one hundred dollars an acre*, while his neighbor's orchard has proved an utter failure. We know that the average product of milk of the farmers' cows, is less than four quarts a day, for the year, while some milk-men get an average product, fifty per cent. greater.

Now this is either accidental, and beyond explanation, or else it is the result of different management; and no sane man doubts that it is the latter. One man succeeds better than another, in farming, as in every other pursuit, because he understands his business better.

How shall this knowledge, which gives abundant success to some, be diffused through the whole farming community? How can we teach the young men of our day, the best mode of managing their farms? The true answer is, by shewing them the best methods of cultivation and teaching them to perform, with their own hands, the processes connected with them—by making them thoroughly acquainted with the best farming implements, the best farm buildings, the different breeds of live stock, and their various qualities—by teaching them *system*, and habits of careful observation, and by making them understand the *reasons* of things—the *principles and science of Husbandry*.

We want a pattern before us—a model by which to work. Farmers are not thrown together like lawyers and manufacturers, so that they can see the perfection of skill, in the various departments of their business. They live separate and apart, and have not opportunity to meet and communicate with each other. There is wanted, in each County, a central point, at which may be collected all the various facts which interest agriculturists; where experiments may be carefully tried, and their results noted, compared and published. There is wanted a place where boys may be *educated to the business of Farming*, practically, as well as scientifically, so that they may carry with them throughout the State, a thorough knowledge of Agriculture, which shall not only ensure them success in life, but shall render them useful examples to other men.

To effectuate all the objects which have been thus briefly suggested, no plan seems to me so likely to prove successful, as the establishment, by the aid of the State of

A MODEL FARM SCHOOL.

Such a school should be, eventually, established, in each County in the State, but prudence would require, that the plan be first tested by the operation of one such school, before a system involving so heavy an expenditure, be fully adopted. In almost every State in Europe, Agricultural Schools have been established or aided by the government, and with such success, as to give to us great encouragement. The greatest obstacle to be overcome, in the old world—the general ignorance of the laboring classes—has long since, thanks to our common schools, been removed from our path. Hundreds of our young men, of all classes of society, would be found prepared, as well as anxious, to avail themselves of the advantages of such an institution.

I proceed to suggest a general plan for such a School, with no idea that it will be found anything more than a mere *text*, upon which other men may preach to much better purpose than myself.

LAND AND LOCATION.

Two hundred acres of cheap land, to consist of woods, pastures, swamps, pine plain, hills and valleys, the more diversified the better, and well watered. Twenty acres of arable land at first, is sufficient.

A location near a sufficient market for milk and vegetables is desirable for the first experiment, because it would allow of a more various culture, and a speedy cash return.

BUILDINGS, APPARATUS, STOCK AND TOOLS.

1. A building, with lecture and recitation rooms, chemical laboratory, and library, to accommodate fifty students, upon a plan capable of being conveniently enlarged, when we see how well the experiment succeeds.

2. A *dwelling-house*, on the farm, to be occupied by the principal and his family, and as many boarders as may be thought best. This may be a common dwelling, unless it should be thought advisable to board all the pupils on the farm, which would involve a much larger expenditure.

3. A *model Barn*, say 40 by 100 feet, with cellars fitted for manure, for roots, for swine, and winter store rooms for carts and other large tools. The barn should be constructed and fitted up, for all the various uses of a farmer's barn, in the most perfect manner.

4. A *Granary, Tool House and Sheds*.

5. The *Live Stock* must depend on the location and leading branches of Husbandry adopted, but it should be, in part, of *thorough bred* animals, so that the farm should exhibit specimens of all improved breeds, and thus furnish accurate knowledge in regard to them, and so that the pupils should be familiar with their various qualities.

6. The *Farm Implements* should be of the very best kinds in use.

7. The *Library and Apparatus* must at first be small, and be increased as rapidly as possible. The experiment might be commenced, perhaps, without either, especially if the school were in the neighborhood of scientific institutions. A thorough chemical laboratory must, eventually, be provided. The best agricultural papers, of course, should be furnished.

TEACHERS AND STUDIES.

1. A *Principal*, who should be a thorough practical farmer, familiar with all the details of farm-

ing operations, who had made Agriculture a prominent business of his life, and has tact and judgment to be the responsible head of the school. He should have the general charge of all the plans of labor, be accountable for all receipts and expenditures, and under the direction of a Board of Agriculture, to be constituted by the State, conduct all the affairs of the school.

He should be a man of education, *the more the better*, capable of communicating instruction, and preserving discipline, and with as many other high qualifications as can conveniently be found combined with the qualities enumerated!

2. An Assistant, competent to teach all branches pursued in the best academies. These two teachers should be capable of instructing in most of the branches to be taught. Occasional courses of lectures might be obtained from scientific men not connected with the school.

3. The studies would be in *general* education, a continuation of such as are pursued in High Schools, so that young men of sixteen or eighteen, could, after finishing their High School course, at the public expense, still advance in their literary and scientific pursuits.

But the leading feature would be instruction in *practical and scientific Agriculture*. And this involves Chemistry, Natural Philosophy, Natural History, Veterinary Medicine and Surgery, &c.

The *Mathematics of Agriculture*, such as farm accounts, surveying, draining, levelling, constructing roads and bridges, the mechanical powers, the uses and forces of water, steam, &c. &c., would of course be prominent studies.

PUPILS.

No pupil should be received, for less than one year, or under fifteen years of age.

They should be subjected to an examination for admission, by a board, independent of the teachers, and admitted only at stated periods, perhaps twice a year.

They would pay a tuition fee, of twenty or forty dollars a year, and pay also for their board. They should be *required* to labor on the farm three or four hours a day, in *all* kinds of farm work—to plow, hoe, sow, reap, mow, ditch, build wall and fence, tend horses, cattle, pigs and poultry. No hired laborer should be kept on the farm, (except females in the house) and the labor should be so apportioned, that each should take his turn in every department.

Any student who should labor more than the required time, should be credited liberally for the excess, so that he might defray his expenses thereby, wholly or in part.

These are the general features which seem best adapted to the wants and *the views* of the public. A far more extensive system is really desirable, and it is hoped will ultimately grow out of successful experiments such as are above suggested. A diffidence among farmers, about *taking what belongs to them*, alone prevents a rapid advancement in Agricultural knowledge.

The funds necessary to institute one experiment, should be appropriated by the State, to be expended under the charge of a Board of Agriculture. How this Board should be constituted may be left for consideration.

The Report of Dr. Hitchcock to the "Commissioners concerning an Agricultural School," appointed by the Legislature of Mass. in 1850, furnishes

the best information on this whole subject, and I have drawn largely from it in this plan. I have endeavored, however, so to modify the various schemes there suggested, as to render them more simple, less expensive, and so, more practicable. It is hoped that the subject will attract the attention of all interested in this, our leading interest, and that it may be discussed fairly, fully, and with a single view to the public good.

H. F. FRENCH.

Exeter, N. H., Jan. 28, 1852.

REASONS FOR PLANTING AN ORCHARD.

BY EDSOM HARKNESS.

1. Would you leave an inheritance to your children? Plant an orchard. No other investment of money and labor will, in the long run, pay so well.

2. Would you make home pleasant—the abode of the social virtues? Plant an orchard. Nothing better promotes among neighbors a feeling of kindness and good-will than a treat of good fruit, often repeated.

3. Would you remove from your children the strongest temptations to steal? Plant an orchard. If children cannot obtain fruit at home, they are very apt to steal it; and when they have learned to steal fruit, they are in a fair way to learn to steal horses.

4. Would you cultivate a constant feeling of thankfulness toward the great Giver of all good? Plant an orchard. By having constantly before you one of the greatest blessings given to man, you must be hardened indeed if you are not influenced by a spirit of humanity and thankfulness.

5. Would you have your children love their home, respect their parents while living, and venerate their memory when dead—in all their wanderings look back upon the home of their youth as a sacred spot—an oasis in the great wilderness of the world? Then plant an orchard.

6. In short, if you wish to avail yourself of the blessings of a bountiful Providence which are within your reach, you must plant an orchard. And, when you do it, see that you plant good fruit. Don't plant crab-apple trees, nor wild plums, nor Indian peaches. The best are the cheapest.

BRITISH AGRICULTURE.

The following interesting summary of British Agriculture is prepared by the *Boston Post*, from a series of letters of the "commissioner" in the employment of the London Times.

He divides the area of England in 27 millions of acres of cultivated land, including meadow and arable pasture grounds, at 27s. 2d. per acre of rent, producing £36,675,000; two millions of acres uncultivated, at 5s. per acre, £500,000; three millions one hundred and sixty thousand acres of moor and mountain, at 1s. 6d., £237,000; making a total of 32,160,000 acres, and of £37,412,000 rent. The area and rent of the metropolitan county, Middlesex, are not included in this estimate.

Of the 27 millions of acres of cultivated lands, 13,332,000 acres are in grass and 13,667,000 acres are in tillage. Of the tillage land, one-fourth is in wheat; producing net (deducting seed) 10,244,700 quarters; one-fourth in barley, oats and rye, producing 15,771,825 quarters; one-fourth is in

clover, seeds, beans and peas, producing 3,701,740 quarters, and one-fourth in mangold, rape and fallow; total 29,718,275 quarters. The wheat produced gives a fraction less than five bushels to each individual of the present population. The average produce of wheat this writer estimates at only 26 3-4 bushels the acre, which is lower than it is commonly estimated at by about six bushels. It is a singular fact that the produce of corn of all kinds is estimated at two millions of quarters less than it was estimated by Arthur Young in 1770. The annual produce of corn, say 30 millions of quarters, may vary to the extent of one-fourth or 7 1-2 millions of quarters, by the effects of a cold, ungenial summer. Taking into account the falling off in the quantity and quality in cold seasons, and it amounts to eight bushels the acre. A late return as to Ireland shows a falling off in one year, 1847, of ten bushels the acre. It is not uncommon to see a falling off of five bushels, or an amount equivalent to the sustenance of one-sixth part of the population.

The whole land of England, it is well known, is held by about forty or fifty thousand landlords. They let to farmers either on leases or on a yearly tenure—the former system being preferred of course by the farmer, the latter by the landlord. The great proportion of English farms are cultivated on a tenure that may be terminated on either side by a six months notice. Still tenants, in many instances, do not scruple to invest a large amount of capital when years must elapse ere they can expect to get an adequate return in the improved value of the land. In these cases their sole reliance is on the character of the landlords, and their condition therefore is one of dependence. It is not always the case that the landlord is the gainer. When a tenant enters a farm, the value of the improvements made by the last occupant is estimated, which he has to pay for at the appraisal; and no little money has been made by shrewd farmers taking farms, “working up to a quitting,” and, by connivance with the appraisers, getting a large profit when they leave in the difference which they demand above what they paid when they entered on the farm. This system leads to fraud, bad farming and political slavery.

There is great disparity of condition in the laborers on the farms. The highest rate of wages this acute observer met with in all England was in Lancashire, where 15s. a week was paid—the lowest was in South Wilts, where the wages were 6s. a week. The average rate of agricultural wages in England is 9s. 6d. a week—it being the greatest in the manufacturing and mining districts. The latter result is clearly shown by comparing the state of wages in those counties where manufacturing has most prospered. The wages in these counties has increased 100 per cent. since 1770. While in all the northern counties of England the increase has been 66 per cent., in some of the southern counties there has been no increase whatever—the wages being precisely the same as they were eighty years ago. There has been one thing, however, that has operated in favor of the laborer, adding immensely to his comforts, namely, the decrease in the price of food. This in the last ten years has been, in most articles he consumes, upwards of 30 per cent. In 1840, for instance, a stone of flour cost him 2s. 6d.; in 1852, 1s. 8d.; in 1840 good tea was 2s. 6d. a pound; in 1852, it is

1s.; sugar, that cost in 1840 6d. a pound, can now be bought for 3d. a pound.

The writer expresses great confidence in the ability of the British agriculturist to meet foreign competition; but to do it he must depend, not on legislative protection, but on individual energy; on improved cultivation, security for his investments, and a reasonable adjustment of his rent. He does not, however, go to the bottom of the whole matter—the abolition of entails, and the creation of a free and independent yeomanry—the owners of the land they cultivate with the right to bequeath them to their children.

WINTER SCHOOLS.

Many persons who have become distinguished for learning and great usefulness, never enjoyed the advantages of a liberal or college education. Living in villages and rural districts, their only opportunities for systematic study under the care of regular teachers, were during the three months of winter, each year. This term was found to be quite as long, in many instances, as the money would hold out to pay “the master,” for which the good people had assessed themselves. But the studies during these short periods were pursued by vigorous minds in vigorous bodies. They were entered into with the whole energies of both, and long before ciphering or parsing began to blunt their desires and pall upon the senses they were called from the school to the plow; but, although away from the class teacher and the recitation room, they did not leave *their studies*. They only emerged from the contracted rules of men, into the boundless expanse of nature—into the field of first principles, to go through their recitations before the Great Preceptor of all, amid the breathing flowers of unfolding spring.

The *winter school* is the stepping-stone to intelligent labor in farming as well as to the professions or the quarter-deck. There often dawn the first longings after immortality, and the desires for usefulness and distinction are kindled into fixed principles for future action. It was there that the over-riding genius and ambition of Napoleon first manifested itself in commanding his forces at the snow fort, in the winter school at Brienne.

But the winter school, after all, is like an episode in a poem, turning the mind aside for a time, from the great school-room of nature, to a more limited course of thought. It is excellent in its way and as far as it goes; laying the foundation of the noble superstructure to be erected in after years. It must not be considered as sufficient, therefore, to satisfy the wants of the child, but only as a help to the studies which he is to pursue in all places and at all after times. He has only entered the vestibule—the rich treasures of knowledge lie hidden far beyond, and are only to be gained by unceasing application.

It is at the close of these schools that a great error is committed by many. There is a sort of

tacit compliance with the idea that when the school is closed, the studies are also suspended; books are laid away in some obscure corner, and the energy of thought which has been excited, is suffered to lie uncultivated and wasting.

Few persons realize how much may be done in a thousand pleasant ways at home. "Let a parent make a companion of his child, converse with him familiarly, put to him questions, answer inquiries, communicate facts, the result of his reading or observation, to awaken his curiosity, explain difficulties, the meaning of things, and the reason of things—and all this in an easy, playful manner, without seeming to impose a task, and he himself will be astonished at the progress which will be made. The experiment is so simple that none need hesitate about its performance." The first important requisite is, that there be mutual confidence between parent and child; then, in every season, and at every place, there may be such lessons and recitations as shall benefit both; imparting new facts and principles to one, and elucidating new views and giving them new force to the other. If at the barn, the boy may be required to give the principle of raising water by the pump, or some other question in hydraulics; if teaming or plowing, why the work is performed easier when the team is near the load than when farther removed; if in the morning, when the grass is sparkling with pearly drops, how dew is deposited; or, if in the silent and impressive evening hours, why he is chilled in passing the valley and finds again the genial warmth on ascending the hill! When around the fireside, daughters may state the principle upon which the smoke ascends the chimney, and why the air is warmest at the top of the room. At another time, why the "pitcher sweats" in the hot noon, or the "dough rises" in the pan.

By thus observing events as they pass, we are *always at school*; both old and young, teachers and pupils in turn. A new enthusiasm is daily kindled in the breast of each other, while new desires for improvement are awakened, and new sources for it are developed at each recitation.

Often call the attention of children to the scenes and objects about you. *Winter* has its impressive lessons in the dreary aspect which nature assumes, and naturally leads into an inquiry of the motions of the planets and the cause of cold. Nearly all the animals, save those dependent upon the care of man, have disappeared. A few tiny birds only, cheer the desolate scene. From whence did they come, and why linger amid these howling winds and driving snows? Have they escaped from the appalling cold of Arctic regions, and find this their temperate zone? These are inquiries of deep interest to the young, and profitable subjects of research. Then look at the forms of snow, examine the flakes with a magnifying glass, and find

how past all human art, are the crystals of which they are formed, and how the wisdom of God is manifested in all his works.

The season of *Spring* is a school crowded with questions demanding answers. The swelling bud and springing leaf;—what secret power impels them! How gather nourishment, exhale, absorb, respire, digest and assume beautiful colors and forms! The friendly birds return. Where have they been! what oceans crossed and continents visited! how travel, by night or day, or both, and with only their own kind, or associated with others, and why did they leave us while their accustomed food was still abundant?

Summer, has its lessons, too; teeming with insect life, "each after its kind," a new world of wonder to the intelligent inquirer. It has

—"tongues in trees,
Sermons in stones, music in running brooks,
And good in everything."

Then *Autumn* comes, in sober russet clad, and perfects the work begun, teaching us to perfect ourselves as season after season rolls along. Thus, although the winter may be a season of peculiar privilege, all times afford opportunities for thought and improvement. Some of the most learned and useful men of the country have gained their knowledge amidst the tools of their craft, and by diligent study during evening hours. That wonderful man, *Kossuth*, acquired the English language in prison, when it was supposed his spirits were crushed by the power of his enemies. Little knew they the iron will that sustained him, or dreamed that in the silent hours of his gloomy dungeon, he would acquire a power to electrify the world. The "Pilgrim's Progress" and "Holy War," of *Bunyan*, which find their way to every household, were also written in prison; and *Baron Trenck*, through tedious weeks and months, watched the artistical skill of the spider upon the wall, and wrote a work of wonderful influence over the imagination.

Thus, with a right frame of mind, with a spirit awake to everything around us, we are ever at school and move in the midst of teachers both earnest and eloquent. Burritt's school was at the forge, and Franklin's at the printing press. A young man by an old-fashioned fire-place, with a log fire, patiently applied himself through the long winter evenings (deprived of the winter school)—became a mathematician and a distinguished citizen, while his friend with equal natural endowments, and liberal aid, passed through the forms of learning in college, and fell as it were, still-born upon the world. A college is a good thing, but never can supply the place of a determined will. Without this will, to use the strong expression of Burns, they may pass the halls of learning, but

"They gang in steers,
And come out asses."

In this universal school we are to lay hold of all possible helps and take hints from all nature, both animate and inanimate, around us. Dr. Beecher says "that in no other way can so much varied, so useful information be imparted, and under circumstances so favorable for educating the child's mind, as through a judicious, well-conducted newspaper. Once, a liberal education could only be obtained by foreign travel. The sons only of the wealthy could indulge in this costly benefit. But now the poor man's son can learn as much at home as a hundred years ago a gentleman could learn by journeying the world over. It is the poor man's privilege to have the world come to see him. The newspaper is a great Collector, a great Traveller, a great Lecturer. It is the common people's Encyclopædia—the Lyceum, the College." It greatly aids conversational powers, gives ease to manner, and supplies a constant stream of useful, general intelligence.

But our last and emphatic injunction is—*Educate your Daughters*. For, after all, the education of the sons mainly rests upon the mother. And upon the intelligence and virtue of these sons will depend the perpetuity of our institutions and the progress and glory of this nation

For the New England Farmer.

VEGETABLES FOR MILCH COWS.

MR. EDITOR:—The pleasant discussion agitated, by your intelligent correspondent from Exeter, of the feed best adapted to *milch cows*, and particularly as to the value of *carrots* for this purpose, I have read with much interest. It would seem, that there need not be any difference of opinion, on a matter of so common occurrence. But still, on this, as on most other subjects, we find very different opinions entertained, by those of equal intelligence and observation.

In regard to *carrots*, it seems to be admitted by all, that they improve the *quality* of the milk, however it may be as to the *quantity*. It is also admitted, that they have a healthy and fattening influence on the animal that eats them. It is certain that they are palatable, for there is no class of roots devoured by the animals with more avidity. For many years have I been familiar with a stock of cows, kept for dairy and milk purposes, to which carrots have been fed more or less every year. Without any exact experiments as to their value or feed, the impression has ever been that they were equal to any other root. If this impression is erroneous, I should like to have it demonstrated. But I cannot relinquish an opinion, without well digested facts to the contrary, that I have cherished from my youth, and which was taught me by a working man of much practical observation.

I remember, a few years since, some of the best farmers of my acquaintance put forward the idea that *green corn*, cut and fed to cows in the months of August and September, when the feed of pastures came short, for want of moisture, was of little or no value. Coming from such sources, I thought there must be something in it; and that

Pickering and Colman and others, who had encouraged the use of this article, as valuable for milch cows, might have been mistaken. Notwithstanding, opinions thus put forward, I find many careful men, who rely on their milk products, continue to grow corn for their cows. And I strongly suspect, that the same class of men will hesitate, before they discard the use of carrots entirely. Among the many projects of improvement now agitated, I know of no one more worthy the attention of careful cultivators than the comparative value of crops as feed for milch cows. Every family in the land is interested in this subject. No sooner does the infant inhale the air of Heaven, than some preparations of milk begin to be made for its nourishment, which preparations continue to be administered, in some form or other, while life lasts. Time was, when the potato was cultivated for the feed of stock; but of late the voracity of man is such, that few potatoes can be spared for this purpose, unless they are suspected of being impregnated with *the rot*. Turnips also, especially the *ruta baga*, have been cracked up, as excellent for milch cows; but there are those, who turn up their noses, when turnips are named, and say they cannot endure the taste of the milk of cows that have fed on turnips. Cabbages also come within the same category. If it were not for the peculiar flavor imparted to milk, by feeding on turnips and cabbages, I should think these crops would yield a more abundant feed for stock than any others that can be cultivated. On looking over the number of the Transactions of the Essex Society, recently published, I perceive the crop of cabbage raised by Mr. Mason, of Beverly, exceeds any vegetable product that has come to my knowledge. The sales from his grounds the present year exceeded \$450 per acre, for several acres. When it is considered, with how little labor this crop is grown, the land being properly prepared, there would seem to be no occasion to go *West* to raise wheat at 50 cents a bushel, when labor can be so much better rewarded by growing cabbage in the *East*. P.

Danvers, January 26, 1852.

CURIOUS CAUSE OF COMPLAINT.—J. BRECK, in a communication which we find in the last *Massachusetts Ploughman*, complains in the most severe terms, of the present publishers of that excellent paper, the *New England Farmer*, for taking the same name as he adopted some twenty years ago, for a similar publication, and which gave up the ghost in July, 1846! He denounces it not only as in bad taste, but as a "*gross outrage* upon those now living" who were connected with the defunct paper, "and something near of kin to sacrilege to the memories of those who sleep in the dust!"—of course including in the list that old Farmer!

Are there no straight jackets in New England! —*Germantown Telegraph*.

GRASS UNDER TREES.—By sowing nitrate of soda in small quantities in showery weather under trees, a most beautiful verdure will be obtained. I have used it under beech trees in my grounds, and the grass always looks green. Having succeeded so well on a small scale, I have now sown nitrate of soda amongst the long grass in the plantations, which cattle could never eat. I now find that the herbage is preferred to the other parts of the field.

*For the New England Farmer.***THE HISTORY OF THE APPLE TREE.**

BY S. P. FOWLER.

[CONTINUED.]

The cultivation of the apple in this country, in the days of the first settlers, was confined to a few varieties. Some of those, now in cultivation, are the High-top Sweeting, Winter Pearmain, and an apple cultivated by Governor Endicott on his orchard farm, and called the Endicott Flatcap Sweeting. This fruit, we have cultivated for its antiquity, and have found it to be a small second rate, late fall, or early winter sweet apple. This apple, and the old Endicott pear, are the only kinds of fruit, that have come down to us from the old governor's famous orchard farm, planted more than two centuries since. Some of the best apples that we now cultivate originated in Massachusetts, many years ago. The Baldwin has been known for a century, and was called in its early days the Woodpecker apple—likewise the Pecker apple, and the Butters apple. It acquired this last name, in consequence of its having originated on the farm of a Mr. Butters, situated in the town of Somerville, in the county of Middlesex. The tree is not standing, but a monument has been placed on the site, where it once flourished. The Danvers Winter Sweet is another fine Massachusetts apple, and has been known for more than one hundred years. It originated in South Danvers, on a farm cultivated by Daniel Eppes, Esq., designated, in his time, as the great "New England Schoolmaster." This tree has long been cultivated in the county of Essex, and was formerly known as the Eppes Sweeting, having acquired this name from its first cultivator, likewise the Ippotent Sweeting and Ipswich Sweeting; it is, however, now generally known as the Danvers Winter Sweet. We have been informed that the original tree disappeared several years ago. And could the site where it once flourished be found, I am persuaded my esteemed friend, Kendall Osborn, Esq., who now owns the farm where or near this fine apple originated, would place a simple monument, like the one erected to the Baldwin, to mark the spot where it once grew. Notwithstanding the many new varieties of apples, that have been introduced within a few years, we doubt very much if two better kinds can now be found, possessing so many good qualities, so well adapted to our climate and culture, and withal so profitable for the market, as these two old, well-tested apples, which have come down to us from past generations.

I wish here to say a few words to those who are about planting the Baldwin, or the Danvers Winter Sweet. As a general rule, the Baldwin bears its fruit mostly in even years, as we term it, hence we may expect the present year to be what is termed a Baldwin year. The next or intermediate year, with a few exceptions, will be a barren year with this tree. Thus we find in these bearing years, a great amount of fruit, and consequently low prices. And in the barren years, a comparative scarcity of fruit, and high prices. Now as we have before said, it is the habit of the Baldwin tree to produce fruit in even years, and but few, if any, in odd years. But this is not a fixed habit; we occasionally find a tree, whose habit is to bear fruit in odd years, and but few, if

any, in even years. Now we can profit by understanding the habits of the Baldwin, and obtain a succession of fruit, both for our own use, and for the market, by budding and grafting from those trees known to bear in odd years. By so doing, we shall probably obtain, in nine cases out of ten, the kind we desire. Care should likewise be taken to cultivate none but those possessing the best flavor, never forgetting, that some trees bearing red apples, and sometimes sold for Baldwins, are not always the genuine kind of fruit. Those about to plant the Danvers Winter Sweeting, should be careful to procure the true kind, as it is sometimes confounded with the Green Sweeting,—which it somewhat resembles, but can readily be distinguished from that apple when ripe, by its beautiful yellow skin, and an occasional red cheek, when exposed to the sun. As we have before said, there are two other old varieties of apples, now in cultivation; one is the Pearmain, cultivated by the fathers of the old colony, and undoubtedly brought over by some of the early colonists. It is still cultivated and esteemed by some persons, who like its peculiar flavor. The High-top Sweeting—is another apple peculiar to the old Plymouth Colony, and was extensively cultivated by the first settlers. Mr. Hovey says there are numerous orchards, wholly of this apple, which now hang (August 16, 1848) full of the golden fruit. It is the opinion of this gentleman, that this fruit has been carried to Ohio, disseminated and cultivated under the name of the Summer Sweeting,—where it is said to be the earliest of the early sweet apples, and is a great favorite.

Josselyn, in his account of Two Voyages to New England, says the fruit trees of the colonists are subject to two diseases, the *meazels*, which is when they are burned and scorched with the sun, and *lousiness*, when the woodpeckers job holes in the bark: the way to cure them, when they are lousie, is to bore a hole into the main root, with an augur, and pour in a quantity of *Brandie or Rhum*, and then stop it up, with a pin made of the same tree. What remedy our ancestors had for what they call the *meazels* in their apple trees, our author does not inform us. Probably the same dose of rum or brandy, as we well know this was an universal medicine for man or beast, in those early times, but we must admit, this is the first time we ever heard of the *ardent* being administered to a sick apple tree. The meridian rays of the sun falling upon the trunk of a fruit tree, are supposed to produce canker and other diseases, at the present day. The lice spoken of by Josselyn, were not caused by woodpeckers, but were the same which now infest apple trees, and are called bark lice. At the present day, those orchards situated in wooded districts are visited by woodpeckers, particularly by the Hairy and Downy Woodpeckers of Wilson, to peck from the apple tree those insects that lie lodged in its bark. To effect this object, these little birds make many holes with their sharp bills, on the trunk and branches of the tree, without injuring it. More attention to the increase and preservation of birds should be given by the cultivator. Birds are, undoubtedly, his best allies in the destruction of noxious insects. The American Ornithologist, Wilson, who well understood the habits of our birds, says, Providence seems to have formed birds for the protection of our fruit and forest trees, from the ravages of vermin, which

every day destroy millions of those noxious insects; and are, in return, proscribed by those who ought to have been their protectors. Let us examine better into the operations of nature, and many of our mistaken opinions and groundless prejudices will be abandoned, for more just, enlarged, and humane modes of thinking. The bark louse is occasionally troublesome in our orchards. The first notice we recollect to have seen of this insect, was from Enoch Perley, of Bridgeton, Maine, written in 1794. He says, these lice are natural in the uncultivated forest, on what is called moose-wood and other bushes. The American tent caterpillar, or lackey, has infested the apple tree from its earliest history in this country. It is a native insect, and is found in our forests, on the wild cherry tree. Our ancestors cultivated the apple mostly for cider, and neglected to destroy this insect. It was not until the year 1817, that the destruction of these vermin became easy by the invention and introduction of a brush, by that distinguished cultivator of the soil, in Essex county, Col. Timothy Pickering.

In consequence of a severe winter, a few years since, these insects were mostly destroyed. From the 4th volume of the Massachusetts Agricultural Repository, published in 1819, we learn that the attention of cultivators was first called to notice the ravages of the apple tree borer at this time. The subject was mentioned to Professor Peck, and several gentlemen, who had never heard of this destroyer of the apple tree. This insect had caused the decay and destruction of many apple trees before discovered, and was at last detected by noticing the holes bored by them at their roots, upon cutting down the trees. Doctor Harris says that our native thorns, and aronias, are the natural food of the borer. He says, killing it by a wire thrust into the holes it has made, is one of the oldest, safest, and most successful methods.

The curculio or plum weevil, commenced its ravages in our orchards and gardens about the commencement of the present century. It appears that Doct. James Tilton, of Wilmington, Delaware, in a communication to Doctor Mease, editor of the *Domestic Encyclopedia*, first gave an account of this insect, sometime previous to the year 1809. This insect at this time was erroneously supposed in its retreat below the surface of the earth, to be injurious by eating the roots of fruit trees. The plum weevil attacks the apple, pear, plum, apricot and cherry. It is probably a native insect, as it differs from the copper colored plum weevil of Europe, described in Kollar's Treatise, page 238. There are many ways laid down in the books for destroying this great pest. But as a general rule, all contrivances to drive away insects from our trees, instead of destroying them, should be avoided. All such attempts in the case of the curculio, by paving the ground under the trees or whitewashing them, is useless, when we consider the plum weevil has wings, and when disturbed on the plum tree, can fly to the apple, pear, cherry, nectarine and apricot. Beside, it is a satisfaction, to know and feel as you hold him between your thumb and finger, that he is about to die, and do no more mischief, and that you have not been guilty of the mean act of driving him over the fence into the garden of your neighbor to annoy and vex him. This insect appears to be now rapidly on the increase. The apple worm is not found

a native of our forest, but was introduced from Europe. The injury sustained by the apple from this insect, was supposed at one time to have been committed by the plum weevil, and these two insects were confounded together. Doct. Thacher, who wrote an excellent Treatise on Fruit Trees, in the year 1821, when describing insects injurious to the apple tree and its fruit, makes no mention of the apple worm.

No good account of this insect appears to have been written or published much before the year 1820. When introduced from Europe, it first appeared on the sea-board, and is now more numerous in New England than in the middle States. In years past, the wind-fall apples were mostly ground for cider, and consequently the worms were destroyed, the cider drinkers receiving the benefit of them. At the present day, although we are nearly rid of cider drinkers, the apple worm is greatly on the increase. The past season they attacked my cranberry bed, and mostly destroyed the fruit. The remedies, laid down in the fruit books, for these vermin, if followed with perseverance, will lessen their numbers, if they do not wholly destroy them. S. P. FOWLER.

Danvers, Jan. 8th, 1852.

[TO BE CONTINUED.]

TO PRESERVE PEACH TREES.

The following is, probably, the best method of preserving peach and apricot trees from the destructive effects of excessive frost. When the ground is thoroughly frozen in the early part of winter, cover the ground under the trees, as far as the roots extend, with muck, (i. e. wet straw, or any other litter that is a bad conductor of heat,) to the depth of from four to six or eight inches, and let it remain until the ground has become fully settled. The muck should be wet, so as not to be a harbor for mice in the spring. The rationale of this mode is this:—The winter or January thaw frequently causes the buds of the peach and apricot, and some other early-growing trees, to start to such a degree, that the excessive cold of the latter part of the winter destroys the germ of the fruit-bud, but not so as to prevent its blossoming. In such cases, if the bud be examined before it blossoms, the centre will be found black and lifeless. By covering the ground as above, the frost is retained in the ground under the tree, about its roots, so that growth does not commence in the winter.—*Dollar Newspaper.*

THE BEST BREED OF SWINE FOR THE FARMER.

I am perfectly satisfied from long experience, and have publicly advocated it for upwards of ten years, that the best and most profitable swine for the farmer, is that breed which will nearly mature at eight to twelve months old, and then weigh, well fattened and dressed, from 250 to 350 pounds. A pig that has to be wintered and kept till sixteen to nineteen months old, before fully fattened, rarely pays for itself at the ordinary price of pork; and the average weight of these, in the United States, even at a year and a half old, I do not believe exceeds 300 pounds.

Now, what the farmers want is a large breed with fine points and great growth. Such a breed


can be made fat at any age, and invariably matures quick. But recollect they must have *fine points*; by this I mean fine or small heads, ears, legs, feet and tail, a wide, deep chest, and a round full body, like a barrel. These constitute what are technically called fine points. None of your big heads, large lop ears, coarse bristles and hair, long legs, great feet, and flabby, thin, slab-sided bodies, after the alligator or landpike order. Of the large breeds, I prefer the Lincoln.

In order to get pigs to weigh well, they must come early. February in the Southern, March in the Middle, and April in the most Northern States, are the best months to drop pigs. Feed them from the start, all they will eat, and they will be ready to kill from October to January; and thus you dispense with wintering any, except those reserved for breeding.—*From the Plow.*

SALE OF STOCK—FOUL AIR.

We copy from the London Times a few items of a late sale of animals at The Knowsley Menagery. The sale was principally of Brahmin and Zebu cattle. A Brahmin Bull brought \$250; a Zebu bull \$64; 21 lamas sold for \$2,935; a pair of alpacas for \$325; a male Zebra from South Africa, for \$750; a female in foal, of the same species, brought \$700; a female quagga for \$250; a lot of three kangaroos, a female and two males, sold for \$525, to go into the zoological gardens. There were also sold the Scotch deer hound, English blood hound and other rare and choice animals. The Brahmin male crossed with the Devons it is said have formed a beautiful race of cattle. In this manner the English people are extending their experiments into all the races of animals that can be collected and subdued.

In the same paper we find the following for clearing a well of foul air. Put a quart or two of unslacked lime into a bucket, and before lowering it into the well, pour a sufficient quantity of water on the lime to slake it; then let it down to the water but not so as to go into it. In a few minutes the well will be cleared of the foul air, the slaking lime either taking up the noxious air or forcing it out of the well. So says the *London Builder*.

 We have received a copy of an Address delivered before the Sullivan County Agricultural Society on the 4th Nov. last, by the Hon. EDMUND BURKE, of Newport, N. H. It abounds with important facts and valuable suggestions. Mr. Burke holds a powerful pen, and we are glad to find it enlisted in the cause of Agriculture. Perhaps few persons have made the subject of political economy so much of a study, and so well understand the influences of the different professions, trades and occupations of our people upon the progress of the country, as Mr. Burke. In his vigorous intellect and persevering habit, the cause may find important aid. Some extracts from the address may be found in another column.

MASS. BOARD OF AGRICULTURE.

The Board met at the State House on Monday, the 2d inst., at 10 o'clock. The President, Col. WILDER, in the chair.

WM. S. KING, Editor of the *Journal of Agriculture*, was elected Secretary, *pro tem*.

The chair suggested that the Board proceed to take up the regular business of the Board, such as reports, several having been recommitted at the last meeting.

The President then stated that the Executive Committee, at the last meeting, had agreed that the resolutions now presented should form part of a memorial to be presented to the Legislature.

Col. J. W. LINCOLN presented a report on crops generally, with the weight of a bushel of each kind of several crops, viz.:

	POUNDS.		POUNDS.
Corn	56	Carrots	55
Rye	56	Sugar Beets	60
Barley	46	Mangel Wurtzel	60
Buckwheat	46	Ruta Baga	60
Oats	30	Parsnips	45
Wheat	60	Round Turnips	50
Potatoes	60	White Beans	60

This report is drawn with care, and is full of reliable information. Perhaps there is no man in the State better qualified to report on these subjects than Col. Lincoln.

Mr. A. W. DODGE submitted a most excellent report on Milch Cows. This was recommitted with a request that the committee append to it a standard of measuring milk, whether it shall be the wine or beer quart. The committee subsequently reported that all persons competing where milk is concerned shall use the wine measure. We believe this is the measure now required by statute of the State in the purchase and sale of milk.

The several incorporated societies of the State were represented by the following number of delegates:—

Massachusetts Society	1	Hampshire, Hampden and	
Essex	3	Franklin	3
Worcester	3	Franklin	3
Bristol	2	Berkshire	0
Middlesex	2	Hampden	1
Plymouth	1	Housatonic	1
Norfolk	2	West Worcester	3
Hampshire	3	Barnstable	1

Mr. DODGETT submitted a report on Farms.

Prof. FOWLER reported on the Hampden Co. Society. In the course of the report he stated that a single squash vine was exhibited having on it 16 squashes, weighing in the aggregate 700 pounds. Some of the parsnip roots were said to be about three feet long.

Mr. PROCTOR reported on the Bristol Society.

Dr. REED reported upon the Housatonic Society.

Mr. KING reported upon the West Worcester Society.

Voted, That the Society be requested to notify the persons who have not already reported.

Voted, That the Executive Committee of this

Board be instructed to confer with the Secretary of State in regard to the publication and circulation of the proceedings of this association, and to make such application to the Legislature as may be deemed expedient.

Voted, That the Executive Committee be also instructed to take such measures as they may deem expedient to secure a more general circulation of the abstract of agricultural societies, published by the State.

Resolved, That the Executive Committee be authorized and instructed to make arrangements with Prof. FOWLER, of Amherst, who contemplates a voyage to Europe, to procure a Report from him to this Board on the agriculture and agricultural institutions of the countries he may visit.

The President introduced and read a paper from the *Pennsylvania State Agricultural Society*, asking the co-operation of other States in calling a National Convention of Agriculturists, at Washington, to take measures for the establishment of a National Agricultural Society.

And, upon motion, the following preamble and resolve was adopted.

Whereas, This Board, at their last meeting, holden Jan. 14, passed a resolution proposing a National Agricultural Convention, and whereas they have received a communication from the State Agricultural Society of Pennsylvania on the same subject,

Resolved, That said communication be referred to the President of the Board for his consideration and correspondence.

Resolved, That the Executive Committee arrange the subject of premiums to be recommended to each county Agricultural Society.

Voted, That the Executive Committee be authorized to call a future meeting of this Board whenever business of sufficient importance may seem to them to require it.

This session of the Board was particularly for the transaction of business, and no discussion of importance took place. After the passage of the above vote, the Board adjourned to meet in the Representatives' Hall at half-past three, P. M.

[For the conclusion of the report of the above meeting, see page 130.]

DISINFECTING LAMP.

A note, from a medical friend, reminds us of a beautiful, simple, economical apparatus, for overcoming bad odors and purifying any apartment where the air is loaded with noxious materials. A description of it has already appeared, but the reference in the note alluded to, has unfortunately been mislaid. The whole matter, however, is simply this. Take one of any of the various kinds of glass lamps—for burning camphene, for example—and fill it with chloric ether and light the wick. In a few minutes the object will be accomplished. In dissecting rooms; in the damp, deep vaults, where vegetables are sometimes stored, or where drains allow the escape of offensive gases; in out-buildings; and in short, in any spot where it is desirable to purify the atmosphere, burn one of these lamps. One tube, charged with a wick, is quite sufficient. This suggestion is really

worth remembering for the comfort of a sick room, because it is easily accomplished, agreeable, and more economical for purifying than any other process now known.—*Boston Medical Journal*.

For the New England Farmer.

PALMER'S SECOND IMPORTATION OF SHANGHAES.

THE RIGHT KIND OF HENS.

BY W. CLIFT.

Of the breed of domestic fowls, imported into this country from Shanghai, in China, and bearing the name of that city, much has been said and written. Hen literature has abounded with their eulogies, and occasionally has been marked with their anathemas. Opinions, that did not reach the press, were conflicting, and it was difficult for a man without the fever, to get at any very satisfactory results in regard to them.

Living in the vicinity where they were first imported, I necessarily heard something of their fame, but found the farmers who had tried them differing very much in their opinions concerning them. Some thought highly of them as a pure stock; some thought them very good for crossing with the native hens, making a larger fowl and one more prolific; while others discarded them altogether, as a *great, coarse fowl*, enormous eaters, poor layers, and the flesh insipid for poultry.

It was worth an effort to get at the truth in this matter, and I determined to make an accurate experiment to test their value. Capt. A. Palmer, who imported the Dixon stock of Shanghaes in 1846, made a second importation, in the spring of 1850. He was very successful with them during the summer, and raised a large number of chickens. Oct. 31st, 1850, I procured a cock and two pullets, by special favor having the choice of the flock. To start them under good auspices, and to keep up with the spirit of the times, the cockerel was named Barnum, and the pullets, Jenny Lind and Juliet. They were about five months old when procured, and Barnum weighed nearly six pounds. The pullets were not weighed. Barnum and Jenny Lind were of a fawn color, and heavily feathered upon the legs. Juliet was parti-colored, with few feathers upon the legs.

They grew finely, and I find in my fowl book an entry Jan. 1st, 1851. Barnum weighed nine pounds Jenny Lind six pounds. May 1st, 1851, there is another entry. Barnum weighed ten pounds, Jenny Lind eight and a half and Juliet eight and a half. December, 1851, Barnum weighed eleven and a half pounds strong, and the pullets about seven.

The fecundity of the pullets will explain this falling off in weight. Jenny Lind began to lay Jan. 16th, and Juliet Jan. 23d. The following record will show the date of the beginning of each litter of eggs, and the number.

JENNY LIND.

1. January 16.....	21 eggs.
2. February 22.....	17 "
3. March 24.....	23 "
4. April 25.....	19 "
5. May 25.....	15 "
6. June 24.....	16 "
7. July 28.....	13 "
8. August 18.....	14 "
9. September 18.....	9 "
10. November 8.....	16 "

Total.....163 eggs.

JULIET.

1. January 23.....	6 eggs.
2. March 2.....	17 "
3. March 30.....	23 "
4. May 3.....	18 "
5. June 1.....	14 "
6. July 14.....	15 "
7. August 8.....	15 "
8. September 1.....	13 "
9. September 25.....	19 "
10. November 4.....	17 "
11. December 4.....	14 "

Total.....171 eggs.

Juliet set once, and with this exception they were not permitted to incubate, as they strongly inclined to, at the end of each litter. They were nearly all the while kept with a large flock of fowls, and confined in a yard during the summer, so that they had no special favors. Had the eggs been sold at the market price, they would have come to five dollars. The eggs weigh about one pound and a half a dozen, which makes the whole weight of eggs nearly forty-two pounds. They have therefore laid three times their present weight in eggs. It will not be wondered at, that they lost something in flesh.

I had heard it stated that this breed of fowls had a tendency to run out in this climate. To test this opinion, I have kept account of the 1st clutch of chickens which were hatched March 24th. There were six pullets out of the ten which nearly grew up. One died at about five months old and one was killed for the table at about six months. The remaining four laid as follows:—One sent to David Jackson, of Taunton, Mass., began to lay at the age of five months, and in a letter received in Dec., he informed me that she had been laying constantly since the first of September. This one was out of Juliet. Another of her chicks began to lay Nov. 1st, at seven months old, and laid 31 eggs, up to the 7th of December, when she inclined to sit. She was then presented to a friend. The third of the clutch out of Jenny Lind was named Catherine Hays. She began to lay Oct. 11th, and up to this date has laid eighty-three eggs, without inclining to sit. The fourth, a bird too unpromising to have a fancy name, and from whom nothing good was expected, began to lay Dec. 17th, and has finished her first litter of 12 eggs.

From these statistics it is manifest that in laying qualities, the second generation is an improvement upon the first. The cockerels have been weighed occasionally, and fair specimens have gained about a pound a month up to the age of 8 or 9 months. One weighed 9 pounds at 8 1-2 months, and the largest weighed ten pounds at nine months. They have been more healthy than any fowls I have ever kept, and I have raised all I wanted.

I have made no accurate experiments of the expense of keeping them, but have this general result:—In 1850, when the larger part of the flock were of the native breed and crosses, the expense per head was more than in 1851, when the greater part of the flock was of the Shanghae breed.

Now if somebody else will give us accurate experiments of other breeds of fowls for the year 1852, we shall be able to tell which are the right kind of fowls. I have some of the Dorkings and white Shanghaes of Dr. Wight's stock, Dedham, and have put them on trial for this year. Will not some fowl breeder test the Black Spanish, the Chittagongs, the Brahma, Pootras, &c., and help us to the fowl facts, which is the only remedy for the hen fever?

The only peculiarity of this importation of Shanghaes is a tuft of stiff feathers or quills projecting from the thigh very much like those of a Bantam. In some specimens the mark is hardly noticeable; in others, the feathers are three or four inches in length. As the importer has never sold any of these fowls, they are at present in very few hands. Of their merits compared with other Shanghaes

and other races of fowls, the reader will judge for himself. With the writer they have passed a good examination and are admitted to the first class for size, hardiness, fecundity and profit. Whether or not they are the right kind of hens, remains to be seen. We shall hold on here, until our own experiments or those of some other breeder point out a better.

Stonington, Ct., Jan. 15, 1852.

W. C.

OFFICERS OF AGRICULTURAL SOCIETIES.

NORTH KENNEBEC (Me.) AGRICULTURAL SOCIETY.

—The *Eastern Mail*, Waterville, of last week, gives a list of the officers of the North Kennebec Agricultural Society for the ensuing year, as follows:

ROBERT AYER, of Winslow, *President*.
ISAIAH MARSTON, of Waterville, } *Vice*
AMASA DINGLEY, of Winslow, } *Presidents*.
W. DYER, *Secretary and Librarian*.
JOSEPH PERCIVAL, *Treasurer*.
EPHRAIM MAXHAM, *Agent*.

BENNINGTON COUNTY (Vt.) AGRICULTURAL SOCIETY.

—The officers of this Society for the present year are

CHARLES HICKS, *President*.
JEROME J. HALL, } *Vice Presidents*.
MARTIN WHEELLOCK, }
NORMAN BOTTUM, *Treasurer*.
P. M. HENRY, *Secretary*.

PLYMOUTH COUNTY (Mass.) SOCIETY.

SETH SPRAGUE, *President*.
JOSHUA EDDY, } *Vice Presidents*.
BENJAMIN HOBART, }
JESSE PERKINS, *Secretary*.
WILLIAM LATHAM, *Treasurer*.
HORACE COLLAMORE, *Supervisor*.

ORANGE COUNTY (Vt.) AGRICULTURAL SOCIETY.

—The officers of this Society for the present year are,

GEO. P. BALDWIN, of Bradford, *President*.
J. S. MORSE, of Strafford, } *Vice*
ALVIN SMITH, of Williamstown, } *Presidents*.
BURNAM MARTIN, of Chelsea, *Secretary*.
B. T. BLODGETT, of Chelsea, *Treasurer*.

A ROUSER!—A gentleman just from California, handed us a potato this morning which weighed *three pounds and a quarter*! Now, gentlemen *doubters*, be kind enough to believe that a single potato grows large enough in California to give half dozen men a good dinner—especially if they have plenty of good beefsteak with it. This is a great country—decidedly!

THE TRADE LOOKING UP.—We have before us the first number of a paper bearing the pleasant name, *Green Mountain Farmer*. It is to be published at Bradford, Vt., twice a month, at \$1 a year. It is well filled, and take it altogether is a very comely child.

A MODEL FARM SCHOOL.

Now that the subject of Agricultural Education is receiving some attention and will probably become a prominent topic in the legislature, we ask our readers to give it their careful attention, and refer them particularly to the article on the subject of a *Farm School* in another column. We do this freely, because the object must be of importance wherever our columns are read—Canada, Oregon, Texas or California; and they are read in them all.

As we have said before, every interest among us, excepting the farming interest, has received

the encouragement and fostering care of the State. That vital interest has been neglected, so that Massachusetts, the pioneer in other education, in ship building, manufactures and inventions, has no institution within her limits to teach her sons the Art of Farming. It is time something were done to advance these interests and check the spirit for emigration which is robbing the old homesteads of the State of many of their best sons. A more intelligent practice of husbandry will do more towards it than a thousand volumes of essays. It is every man's duty to aid in the work.

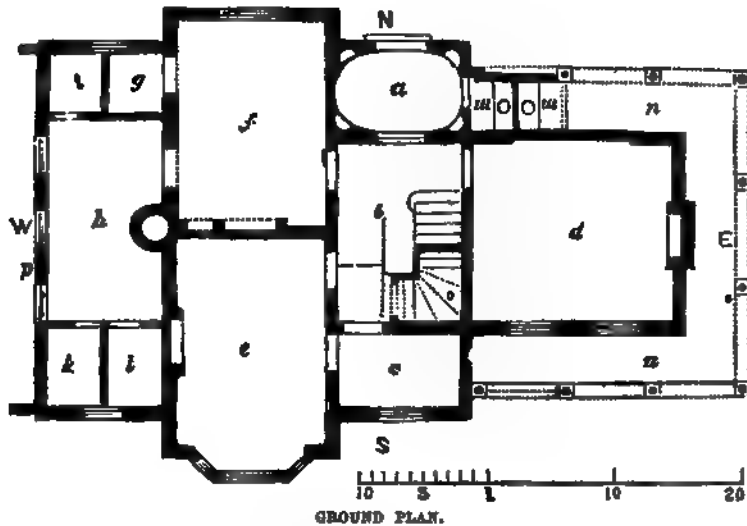
COTTAGE ARCHITECTURE.**PERSPECTIVE VIEW OF A GOTHIC COTTAGE.**

We give in this number the elevation, ground and chamber floor plans of an attractive and pleasant cottage. We do not say that it is perfect in all its architectural points, but that it combines so many advantages that one may adopt it as a whole, without doing violence to a tolerably correct architectural taste. Or, it may be modified somewhat to suit location or individual ideas. At any rate, we hope many of our readers will find something in it to meet their wants.

A manifest improvement of taste has been exhibited, within a few years, in the construction of dwellings, as well as an increasing regard for convenience and health. The discovery has been made that neatness, taste, and even elegance, may be combined with utility and economy, in our houses and cottages;—a fact unknown, or little heeded, by our matter-of-fact, prosaic ancestors. To gratify this commendable feeling, and to extend it in the community, if possible, we shall present to our

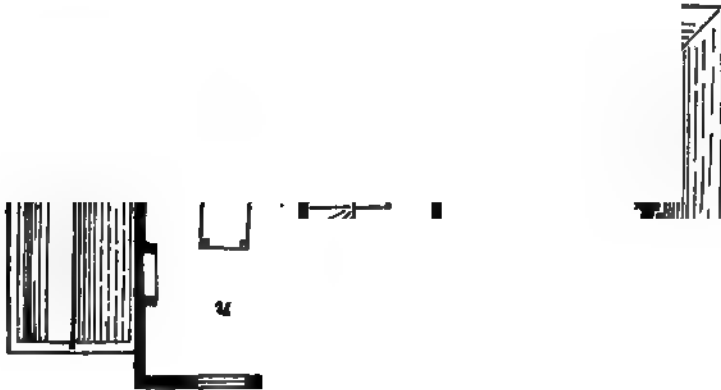
readers occasional specimens of cottage architecture, from both original and selected designs. As an illustration of the manner in which we design to treat this subject, we here introduce a perspective view of a country residence, on a small scale, in the Gothic cottage style. It is transferred, with some alterations, from Loudon's "*Encyclopædia of Architecture*."

In the ground-plan, with the points of compass indicated by the letters N. S. E. W., *a* is the entrance porch, which is to be finished with a covered roof, and to have Gothic niches at the angles, for statues, or vases for flowers. From this you pass to the hall and staircase (*b*), by a Venetian door, the upper part of which may be glazed with stained glass; thence to a small ante-room (*c*), which may be used as a book-closet, or, having a good southern exposure, as a conservatory for plants. From this there may be a glazed door leading to a piazza, surrounding the eastern wing



of the cottage. From the hall you enter the dining room, (*d*). There are two water-closets, (*m. m.*) both under cover; one entering from the porch, the other from the piazza. Under the principal staircase is a flight of steps, (*s*), shut in by a door descending to the cellar. Behind the wash-house, (at *p*), is a kitchen yard, which may be surrounded by a high fence, and covered with shrubbery; where may be the wood-house, privy, well, etc.

In the chamber floor plan, *q* and *r* show the landing and stairs; *s*, a balcony over the conservatory, entered from the staircase window; *t*, *u*, and *v*, bedrooms, with the places for the beds; *w*, linen-closet; *x*, passage-way.



MEETING OF THE MASSACHUSETTS BOARD OF AGRICULTURE.

AFTERNOON SESSION.

The Board met at half-past three in the Representatives' Hall, Mr. WILDER, President, in the Chair.

The President submitted a letter from Dr. LEE, who stands at the head of the Agricultural Department at Washington, approving of the proposition for holding a National Convention for the promotion of Agriculture. He recommends that it should be held at Washington, in the month of June next. He was sure it would be attended by delegates from nearly or quite every State in the Union.

The President also submitted a translation of a French publication, giving an account of the National Agricultural Institution of Versailles, France, which had been forwarded to him by ABBOTT LAWRENCE, our Minister at the Court of St. James.

The thanks of the Board were voted to Mr. Lawrence on motion of JOHN W. PROCTOR, of Danvers, and the document itself was referred to the Executive Committee.

Mr. WILDER then, in behalf of the Committee to whom was referred the subject of Agricultural Education, submitted a preamble and set of resolutions. We can only find room for the two resolutions expressive of the opinion of the Board in relation to action by the State.

Resolved, That Massachusetts, by an enlightened policy and wise legislation, has rendered her system of education worthy of her exalted reputation, and that this Board most earnestly desire her to complete that system by providing kindred institutions for the scientific education of the farmer, upon whom is levied so large a share of the taxes for the support of Government and philanthropic objects.

Resolved, That it is the duty, as well as the interest of the State, to aid in furnishing the means for such an education, and that for the want of this education, millions of dollars and a vast amount of time, energy and money are annually lost to the Commonwealth by the misapplication of labor and capital in husbandry; and *resolved further*, that this loss is mainly to be attributed to the want of a proper system for the acquisition and diffusion of correct information, as to the most approved arts of cultivation, and the best means of perfecting this unfailing source of independence and happiness.

Mr. WILDER, in submitting these resolutions, remarked that it was a most extraordinary fact, that while the aid of science has been invoked to all other callings, and while it has been extended to the other interests of the State and country by the National or State governments, to this day not a dollar has been contributed by our national government to aid this most important interest of agriculture. What we want now is an institution to educate young farmers for the calling. He closed by reading an extract from Dr. LEE's letter, in favor of some such means as is proposed by the Board, for the promotion of a thorough and scientific agricultural education.

Maj. WHEELER, of Framingham, spoke of the low ideas which existed in his younger days in regard to the education of the farmer. It was thought if a boy learned to read, write, cipher and spell, he would make an excellent farmer. Too much of this want of education exists at the present day, and farmers are too willing to go on in the old way of their fathers. He showed, by alluding to Belgium and other European countries, that Massachusetts, under a similar system of scientific agricultural practice, might be made to produce a much larger amount of breadstuffs than she now does. He was decidedly in favor of encouragement to agricultural education.

Rev. Mr. PUTNAM, of Roxbury, was next called upon. He said he came to the meeting as a member of the Legislature, to learn what the wishes of the farmers of the State are in regard to this subject, in order that he might act more understandingly when called upon to act in another capacity.

Mr. DODGE, of Hamilton, discussed the application of science to agriculture, showing that this application is practicable. Alluding to agricultural science as developed in Europe, he contended that the same great principles are applicable in this country. The question is, then, why is not this science shown to our farmers? The great reason is, that there are not men enough here to teach it. There are a few men qualified for this duty, such as Dr. Lee, Professor Norton, and some few others, but they cannot be expected to experiment, uncompensated, for the benefit of others. Here, then, is seen the need of aid from the State, to extend the science of agriculture to the farming community. He hoped the day was not far distant when Massachusetts would contribute at least a pittance to carry out this object; when agriculture would come up and present her claim to the National government for recognition and aid, and that that claim would be met and allowed. But he would not wait for this. The States should go on and establish agricultural Bureaus for themselves, in order that they may collect statistics to be forwarded to the national Bureau when that is established. He hoped that the friends of this movement would persevere in their work until their claim is allowed.

Mr. GORHAM, delegate from the Hampden, Hampshire and Franklin Society, next spoke. He said he saw in the community a prevalent apathy in regard to this subject, in the continuance of which he foresaw great evils to the State if not to the race. The dependence of all other interests upon agriculture he dwelt upon, and said that when it suffers all others suffer; when it fails, all others fail. And yet the position of this cause, in a national point of view, is most sad and humiliating. It was useless to say that this cause would take care of itself. It would not. The calling has to

do with the great mysteries and laws of nature, and you can no more expect agriculture to flourish without knowledge, than you can expect religion to flourish separated from the practice of virtue and morality. What science has done for commerce on the ocean, she has yet to do for agriculture on the land. The American farmers are looking anxiously for some guiding star to direct them in their calling. He believed that star had risen; that its glimmerings can be seen, and that with faith in it, it would lead to glorious results.

Professor FOWLER, of Amherst College, inquired, why at this day there should be any doubt of the value of education as applied to Agriculture? Especially, why should this doubt exist in Massachusetts? One reason, he believed, is that the advocates of agricultural education are not distinctly understood in their principles or purposes. It was not true that science, in its application to agriculture, was independent of labor and capital. Mere book knowledge is not better than practical knowledge drawn from experience, and the friends of this movement do not entertain or sustain any such theory. Science, without common sense, will not succeed. What they mean, is, that science, with common sense, energy, and practical experience, will accomplish the desirable results at which they aim. He supposed a young man about to enter into a partnership with earth and nature, in his profession as a farmer. To enter into this partnership profitably, he should understand the elements of the soils, the laws of geology and of the vegetable kingdom, in order that he may adapt the one to the other. The laws of animal physiology it is also necessary for him to understand, in order to adapt his stocks to his crops. The laws of chemistry, of the composition of soils, of mechanics, the great laws and agencies of nature, all should be known and observed by him, in order successfully to prosecute his calling. The great improvements in other arts, by the application of science, were alluded to in this connection, and the speaker asked, is agriculture the only art that is to receive no aid from science? is she, the oldest daughter of nature, after having fed her sister arts, to be dismissed without any dower? This ought not so to be; the friends of agriculture ought not to allow this so to be. He came to the conclusion that it is the duty of the friends of agriculture, and the duty of the Legislature, to establish an institution independent of all others, from which this knowledge and science can go forth. Establish it with limited means at first, and then let it grow, as the occasion may demand and as its usefulness may be exhibited in its results.

Mr. PROCTOR said, I concur most heartily in the general views of the resolutions now before this meeting. They say, in one word, that it is the bounden duty of the government, both National and State, to do something for the encouragement

and protection of the interests of the farmer. Is not this so? Who are the farmers? Are they not *three-fourths* of the whole community? How are they rewarded comparatively? Look at their resources exclusive of the lands they occupy, and will it not be found that the *one-fourth*, comprising the commercial and the manufacturing interests, have more than the other *three-fourths*? Is there any equity in this? Is not the farmer as useful and reliable as any other class of citizens? On whom has the State ever relied in time of danger—if not on the yeomanry of the country? Those, then, who are her main stay in time of peril, have a right to aid and encouragement in times of prosperity. How can this aid be best applied? Will it not be best done by educating and fitting them to pursue their employment with intelligence and success.

But *first and foremost*, should the STATE take this matter under its own fostering and guardian care. Let there be established a department of agriculture, analogous to that of education;—to whom shall be entrusted the entire supervision and direction of all matters connected with this subject; and soon will it occur to them to mark out the path of improvement. Until such a Board is established, no appropriation of money is asked. And when established, the probability is, no expense will be incident thereto, except that of sustaining a competent Secretary—all of whose time will be required, in connection with the operations of the Board. Surely no valid objection can be made to an appropriation so trifling, compared with the benefits to be gained. Much has been, and may be said in relation to the education of the farmer. Some say this can be done best, by establishing agricultural teachers, in the existing colleges and schools. That teachers of this description may be advantageously introduced, no one will for a moment doubt;—and that it would be highly useful for all, whatever occupation they contemplate, to know something of the science of agriculture will be readily granted; but that the smattering of information there attained will be adequate to the object in view, no one acquainted with it can for a moment believe. Agriculture is a science—a science most complicated, and difficult to be understood. Its perfect comprehension needs a combination of all the other sciences—chemistry, geology, botany, and mathematics, are all involved in the study of the science of agriculture. No one can hope to master this science, without becoming an adept, in each and all the others. It is not sufficient to learn them *technically* and *formally*—but he must enter into the philosophy of them, and understand the reasons of the changes brought about.

Mr. BAGO, of the Hampden Society, spoke of the necessity of the appointment of a body of men competent for the work—who should collect and em-

body the facts which exists now among farmers, and arrange them for the benefit of the community at large. Thrift, he said, was the invariable attendant upon knowledge, not of scientific knowledge alone, or of practical knowledge alone; but of both combined. It was the duty, therefore, of the Legislature to encourage this thrift by spreading knowledge among agriculturists.

Mr. NASH, President of the Hampshire Society, believed that common sense and experience were of the first necessity, and to these science would lend the most valuable assistance. He did not believe that practical farmers could become distinguished chemists. But there are principles in the sciences of zoology, of animal physiology, &c., which any person may acquire readily and apply in his every day experience. Such a knowledge may be obtained in a very short time—if the student, be he the farmer's son or the farmer himself, is directed to the right point. He would recommend a course of study from which advantages might be received at once. In these requests to the Legislature he would advise the friends of this cause to ask for a small sum to try the experiment, and then if "their works did not praise them," they would ask for no more. He thought that more than ten dollars might be saved in each one of the 100,000 barn-yards in this State, by knowledge of a proper management of the manure. Even at one dollar, \$100,000 will be saved to the State. The proposed grant of the Legislature would hasten this result, at least, several years, and even if it hastened it but one year, still as much or more would be saved as is asked for the friends of this cause. He said that by an application of new treatment to a piece of land which he purchased, from eight acres, he had increased the crop of grass from three tons to fifteen tons. He hoped the means of extending this knowledge would be granted by the Massachusetts Legislature the present session.

The meeting then, on motion of Mr. SIMON BROWN, of the *New England Farmer*, adjourned to 7 o'clock.

EVENING SESSION.

The meeting was called to order at 7 o'clock. Lieut. Gov. CUSHMAN was introduced to the meeting, and offered the following resolution—which he sustained in a few interesting and appropriate remarks:—

Resolved, That the resolution now under consideration be adopted, and that the officers of the Board of Agriculture be directed to present the same to the Legislature, and to urge such action by that body as may be thought most expedient to carry into practice the principles contained in said resolution.

He said the question most important is, what shall be done? The resolutions have been ably discussed and the unanimous opinion seems to be that the time has come when agriculture should be exalted and receive from the government that

attention and aid which is her right. How shall this be done? By the establishment of a Board of Agriculture as indicated in one of the resolutions. Make agriculture one of the departments of the Government.

Mr. CLARK, President of the Hampshire, Hampden and Franklin Society, was called upon. He said the word science had got to be a humbug. Some of the weekly agricultural papers had held this word up as a source of terror to the farmers, threatening them with the loss of their farms. Science is truth. Knowledge is science, and knowledge is power. The man who possesses the most knowledge finds it all useful upon his farm; the more he knows the more he wants to know. The objections to this subject he believed arose from ignorance, and from those who are willing to abide in their ignorance. Farmers had not ought thus to be taught to break down their own interests. We want more knowledge to prevent the misapplication of labor—and a school is required to impart this knowledge.

Mr. DAGGETT, of Bristol county, next spoke, and expressed his gratification at Mr. Nash's remarks, but thought they did not go far enough. Mr. Nash, he said, showed that the great majority of farmers could not be thoroughly, scientifically educated. Is not this, Mr. D. asked, an additional argument why a school should be established? Suppose a school be established with say three hundred and twenty scholars, and after having acquired their education, they distributed themselves through the towns in the Commonwealth, where they put theory and knowledge into practice. Their neighbors around them would copy their example—and thus, *by example*, would this knowledge be disseminated from town to town throughout the State. Why, he asked, do farmers take so little interest in the promotion of this knowledge? It is because they do not feel its importance. The great object of this school should be to disseminate knowledge throughout the State.

Mr. S. SPRAGUE, of Duxbury, President of the Plymouth Society, spoke of the pleasure he had experienced at these meetings. The opinion was expressed by farmers from all parts of the Commonwealth that more agricultural knowledge is needed in our own State; and this unanimity of opinion strengthened very much, the hands of those engaged in this movement. He believed it cost more to raise a bushel of grain in New England than in any other country,—owing to the sterility of our soil. This disadvantage is to be overcome,—and he believed it could be done by farmers better understanding the duties of their profession. It was difficult to fix upon a plan for extending this education. Different schemes were proposed. He was willing to begin with a commissioner of high scientific attainments, who, if thought advisable, might be summoned by a

Board composed of the Presidents of the incorporated agricultural societies. This Board should offer premiums for experiments calculated to throw light upon practical farming; these experiments to be made under the direction of the Commissioners and the premium to be paid by the State. In this way much valuable information might be obtained.

Dr. GARDNER, of Seekonk, hoped the propositions which had been advanced might be carried out. He would like to see an Agricultural College, though he believed the better course would be, to disseminate agricultural information by means of the District Schools. He would also advocate the establishment of an agricultural professorship in every college in the State. This course, he thought, would reach a far larger number of farmers or farmers' sons, than one exclusively Agricultural College.

Rev. Dr. CHOULES said, the suggestion of the appointment of a Commissioner, as made by Mr. Sprague, struck him favorably. Associated with such a Commissioner, there might be ten or twelve persons to go through the various school districts in the State and lecture upon the importance of scientific education to the farmer. Meetings such as these are important, but much might be accomplished by going right among the farmers themselves, in their school districts and talking familiarly with them upon the subject. This course would make an alteration in the feeling of the masses upon the subject and that is what is wanted. He believed farmers are yet to be taught that they must "magnify their office." A practical farmer was very well, but he cannot make farmers. He cannot educate others to be farmers. An educated man is a powerful man, whether he be a farmer, a mechanic or an artisan. The man eminent in his profession, whatever it is, stands before a third or second rate man, in another calling. Power, power, is what is wanted by our farmers, and this must be got by knowledge. Dr. Choules alluded to what he observed of farming in his recent tour through Europe. He was astonished at the results he there saw, and which showed the most extended and thorough system, connected with the most rigid economy. He eulogised the exhibition of the British Royal Agricultural Society, and believed \$10,000 would be well expended in sending a delegation of our practical farmers to the great exhibition of this Society, and then let them come home and tell what they had seen. They would confer a great benefit upon the farmers of Massachusetts.

Mr. BIRD, of the Executive Council, did not agree with the general ideas which had been presented. He did not believe a society like the Royal Society in England would help our farmers, and to show this, proceeded to contrast the condition of the agricultural population there, with

ours. He believed we have now all the machinery in operation which is necessary for the diffusion of agricultural knowledge, and that machinery is our system of common schools. He did not believe in colleges of any kind, as the proper place to impart this instruction, and thought the common school system is all that is needed. He also denied that the State had afforded assistance to other interests to the neglect of agriculture.

Professor FOWLER replied to Mr. Bird, and showed that other interests had been better cared for than agriculture. He said the industry of the country might be divided into three great branches. First the agricultural branch, which produces the raw material; second, the manufacturing branch, which works the raw material into shape for the various uses of man; and third, the interest which conveys these products to different portions of the country or the world, to supply the demand for them. Now, he would ask, is it not true that the country has done much for manufactures, and for commerce, for railroads, &c. These two branches have received much aid and encouragement, but the agricultural branch has not received aid. There was another way in which this might be shown. The last returns show that the number of native Bay State men who are engaged in tilling the soil in Massachusetts is gradually decreasing, and their places are being filled by foreigners from all portions of the old world. Our young men of talent and enterprise are forsaking their farms and going into other callings, where there is more opportunity for exercise of their powers. It is admitted that science is the proper basis for all the arts. It is important that the want of the application of science to agriculture should be felt, and then we should go on to apply it. Common schools would never meet the wants of the farmers for agricultural education. It must be taught in a substantial independent institution. He also objected to Mr. Bird's idea, that there is antagonism between our colleges and common schools.

Mr. PUTMAN, of Roxbury, repeated his ideas advanced a few evenings since, and reported in our columns, that the best way to promote agricultural education is to teach farmers' sons to observe closely the laws and agencies of nature in their relation to agriculture. In conclusion, he expressed his satisfaction at the tone of the debate during the meeting, and pledged himself to use all his efforts to promote agricultural education in any position where he might have the opportunity. His own views were in favor of a school where farmers' sons can be taught practically in their callings. These pupils would go forth as school teachers and disseminate this knowledge. He would have a farm managed by one of the best practical farmers he could find, to lead the boys through the field. In the school-room they might have

lectures from the most thoroughly scientific men who could be found.

Mr. KING, editor of the *Journal of Agriculture*, illustrated the application of science to agriculture, and showed the good results which might be expected to follow this application. He closed with an appeal for a suitable school to teach this science.

Upon motion of Mr. PROCTOR, of Danvers, the resolutions under discussion were then adopted unanimously.

Some further remarks were made by Mr. NASH, of the Hampshire Society, HARVEY DODGE, Esq., of Sutton, and others, and the meeting then adjourned.

EIn the above we have only given a mere outline of the remarks which fell from each speaker. Many of the speeches were distinguished for the excellent ideas and practical suggestions which they contained, and ought to be preserved. We have drawn upon our limits, however, to the utmost extent, long before the notes taken are exhausted.

For the New England Farmer.

PLOWING.

BY R. B. HUBBARD.

MR. EDITOR:—The object is twofold. *First*, to secure the decomposition of whatever vegetable matter has been produced by the soil. *Second*, to expose the soil to the action of the atmosphere and of water.

Suppose a large growth of clover to remain and decay upon the surface. It will enrich the land. Some portion, yielding to the combined action of heat and moisture, will become incorporated with the surface soil and add to its fertilizing properties. A much larger portion, however, for want of suitable moisture to promote decomposition, will vanish into "thin air."

The constituents of plants are of two classes, organic and inorganic. These elements are found to exist in about the ratio of 9 of the former to 1 of the latter; that is, in every hundred, about 90 parts of organic matter to 10 of inorganic. The organic portion is volatile; that is, readily assumes the form of atmospheric air, or gas; while the bases of the inorganic are permanently solid, except by the application of intense heat, and their compounds by water, such as lime, clay, flint, iron, magnesia, soda, sulphur, &c.

Of the organic elements, carbon, the principal constituent of all plants, unites with oxygen and produces a subtle fluid, which is always present in the atmosphere. Ammonia, so essential to the growth of plants, itself a gas, is composed of hydrogen and nitrogen. One a constituent of water, and the other of air.

These organic substances are either absorbed by the leaves, the respiratory organs of plants, or are taken up by the roots. In order that they enter into the circulation by the latter mode, which is doubtless the process by which the plant receives most of its nourishment, these volatile substances must be concentrated. This is effected by the

soil, absorbing these gases, and subsequently by chemical combinations among organic and inorganic elements, which have affinity for each other.

For instance, sulphur and lime have no affinity. But oxygen and sulphur have, and readily unite, producing sulphuric acid, which unites with lime, forming sulphate of lime, or gypsum, which is a powerful fertilizer. So of phosphorus and lime. They may lie in contact in the earth any length of time and not combine unless by the intervention of some other substance. But let the air come in contact with the phosphorus and phosphoric acid will be produced, and that will seize upon the lime forming phosphate of lime, which is a most valuable fertilizer.

As this organic matter is indispensable to the growth of the plant, and as it is received mainly from the soil, through the roots, it must be obvious that the soil will be benefited by subjecting it to such a process, as will cause it to absorb these volatile substances. This is accomplished by plowing.

First, by turning the soil bottom side up, a portion, from which the air had been excluded, now comes in contact with, and absorbs it.

In the second place, the surface, which had become encrusted and almost impervious to the air, is now broken up and made accessible to gaseous substances, as far down as the plow has penetrated.

As before remarked, a large portion of the clover dries up and vanishes. That is, it is resolved, by affinities, into its constituent elements, which mingle with the atmosphere and is lost to the soil upon which it grew.

By plowing, this clover, while green, containing all the nutritive properties which it has derived from the soil, modified by atmospheric influences, is covered so deep, as to prevent the escape of gases by evaporation; and yet, not below the influence of heat and moisture. Consequently it decays, or is resolved into its constituent elements, which combine with the soil and by so much increase its fertilizing power. The same is true of stubble, weeds and every thing that grows from the earth.

Hence the importance of plowing—of frequent plowing—of thorough plowing and deep plowing, of which, with your permission, Mr. Editor, I may speak at some future time.

Truly yours, R. B. H.

Feb. 5, 1852.

REMARKS.—The above excellent article is so concise and plain that he who runs may not only read, but understand. It is in style and character just what our readers want, and we hope the writer will favor us often with the results of his studies, experiments and observation.

WESTERN HORTICULTURAL REVIEW.—JOHN A. WARDER, M. D., Editor. Monthly—at Cincinnati.—This work is conducted with ability, has intelligent correspondents, is printed handsomely on good large, fair type, in double columns, and appears every way as though it were having a good time in the world. We hope friend WARDER will not be led away by the seductive influences of the

Horticulturist and *Genesee Farmer*, and change its beautiful proportions into one *broad column*, which is neither easy to read nor pleasant to the eye. Well, how can one help making a good book in such a charming city as that Queen of the West!

For the New England Farmer.

ANNUAL MEETING OF N. Y. STATE AGRICULTURAL SOCIETY.

The annual meeting of the society was held at the capitol, the Assembly Chamber having been proffered for the use of the society. A very large number were in attendance, and the very best spirit prevailed, showing that the farmers of this noble State, in some measure, at least, appreciate the importance of their noble calling. The society being called to order, the report from the secretary was read giving a condensed account of the society's operations during the year—followed by the Treasurer—showing the receipts during the year \$17,218 85; expenditures in Premiums, expenses, salaries, &c., \$12,318 14. The officers for the ensuing year were selected. In the evening, at the same place, a most interesting address from the President, Mr. Delafield, to the members of the society who received prizes at the World's Fair, was made. This was an interesting event in the society's history. Previous to the opening of the Exhibition in London the society appropriated a sum of money to be awarded to such of the members as should receive prizes—about 15 were so honored—and they, I doubt not, will with great interest revert to the scene of this evening.

After the President's address, Prof. Norton, of the Albany University, who is delivering a course of lectures on Scientific Agriculture to a class of about 50 students, delivered one of the best addresses it has been my pleasure to hear, on the importance of science to the practical farmer. On Thursday evening the President delivered his farewell address, which was every way worthy of his distinguished reputation.

The society for the first time held an exhibition of Fat Stock, dressed meats, &c., and the display of fine cattle and sheep was such as to do great credit to the State. I understand that this is to be continued as an annual show, and from the energy and enterprise of those connected with the society, and of the farmers of New York, it will at no distant time equal the famous Christmas Smithfield Show in England.

A very fair exhibition of winter fruits was shown—in which the famed apples of western New York were distinguished. But among the most useful of all the articles shown in the fruit department, for the pomologist, the nurseryman, and the farmer, was the splendid exhibition of modelled fruits prepared by Mr. Townsend Glover, Fishkill—apples, pears, cherries, plums, peaches, nectarines, grapes, cranberries, &c., that again and again deceived the people, though mingled with the real fruit. The insects which are common and injurious to plants and vegetation, exhibited, were so true to nature, that the Prof. of Entomology in the university, on examining them, without having been informed of the preparation pronounced them genuine specimens of the insects, a tribute to Mr. Glover which was most creditable. The society, I understand, have secured the insects, and a large collection of

the models. Their wisdom in doing this will be appreciated by all who know the importance of the fruit culture in the State. The society awarded Mr. Glover a gold medal for his truly splendid exhibition.

At the close of the proceedings of the society, the premium on farms, dairies, butter, cheese, grains, &c., were announced, and splendid pitchers, cups, medals, &c., awarded to the successful competitors, who hailed from Niagara to Long Island, showing the universality of interest which this great society secures—an honor to the State and to the country.

I have thus given you a rapid sketch of the proceedings, which I trust may not prove uninteresting to your readers.

The next Fair is to be held in Utica in Sept. next, (the 7th, 8th, 9th and 10th.)

Yours, &c.

ADVANTAGES OF THE FARMER OF THIS AGE.

Within the course of a century, what vast discoveries have been made in relation to the structure of plants and to the vegetable economy in the functions, especially of absorption and perspiration. Science has shown the mode in which plants take up their aliment, the particular *kind* of aliment required for them, and the circulation of the food in the juices of the plant, its changes by respiration and its evacuations by perspiration. These accessions to our knowledge of the vegetable kingdom have been made by degrees, the results of long studies and exact experiments by many different persons. In relation to perspiration, Dr. Hales found that a sunflower lost 1 lb. 14 oz. weight in twelve hours of a hot day. In a dry night it lost about 3 oz. In a moist night little alteration was perceptible.

Haymakers know the rapidity with which grass is dried, which is owing to this perspiration, the juices not being again supplied by absorption, as when the grass was living. It would be interesting to trace the history of these discoveries in vegetable physiology, but would require more time and space than we can now devote to the subject.

A century ago, nothing, it may be said, was known of the vegetable anatomy. Now the structure of plants has become nearly as well known as the anatomy of the human body, though the knowledge of the former is probably confined to a fewer number of persons than the latter.

It is only little more than fifty years since the first suggestion of what were the true sap vessels of plants, was given by Dr. Darwin, and their operation and functions ascertained by experiments of himself and others, followed to more certain results by Mr. Knight. It was discovered from these experiments that the sap ascends through the spiral vessels of the plant, forming in its ascent the alburnum, and descending in the outer bark. This knowledge is valuable to the

farmer, who by this knows that if he would destroy his tree by girdling, he must cut through the alburnum to the hard wood, while if he merely girdles the outer bark of his vine with a narrow ring after midsummer, when the sap is descending, he may much increase his crop of grapes by preventing the descent of the sap, and retaining it for the nourishment of the fruit, without any injury to the vine, if the ring is not made too wide to unite again. The two gentlemen named, with a few others, Mirbel, Malpighi, Grew, Wildenow, Hales, Priestly and others, by a series of interesting experiments, have made us acquainted with the structure and functions of the vegetable world.

To Dr. Priestly we owe the knowledge of the respiratory action of the leaves of plants. And his opinion was, that the inspiration was by the upper, and the expiration by the under surface of the leaf. This fact is corroborated by the use of the cabbage leaf in medical treatment; the upper and smooth side is always applied to the skin, which "draws," as it is termed; while the under side, if applied in the same manner, will have no such effect.

It is true a great deal remains for the research of science to accomplish. "When we attempt," says Dr. Smith, "to consider how the particular secretions of different species and tribes of plants are formed; how the same soil, the same atmosphere, should in the leaf of the vine or sorrel, produce a wholesome acid, and in that of a spurge or machineel a most virulent poison; how sweet and nutritious herbage should grow among the acrid crowfoot and aconite, we find ourselves totally unable to comprehend the existence of such wonderful powers in so small and seemingly simple an organ as the leaf of a plant."

For the New England Farmer.

LUSUS NATURÆ.

BY JACOB B. FARMER.

MR. BROWN:—I have an apple tree that was grafted about 8 years ago with Porter scions; the scions lived, grew, and bore handsomely-shaped, and well-flavored Porter apples for 3 or 4 years; but last year the fruit changed its shape, (retaining the Porter flavor, but the flesh a little more hard and crispy) resuming the shape of the parent stock, which was like a blue pearmain. The tree grafted was a healthy, vigorous, and good bearing tree. I wish to know if the change was a freak of nature, or was it in accordance with nature's laws. The above statement may seem strange, but it is no more strange than true. If you or some of your correspondents will give their views on the subject, I think it may lead to some important facts, which, as yet, are not well understood.

Yours, &c.,

J. B. F.

Concord, Jan. 27, 1852.

REMARKS.—We never have heard of a case of this kind, before. Will some of the Pomologists take it into consideration?

For the New England Farmer.

PEACH TREES AND SMOKY CHIMNEYS.

BY STEPHEN ADAMS.

MR. EDITOR:—The above subjects have been frequently discussed, and it seems to me without any very satisfactory results. Peach trees still die before old age comes on, and chimneys still smoke, notwithstanding all the instruction that can be found has been followed, which seems to prove that there is much misapprehension upon these subjects. Is it probable that the cold kills the peach trees when the thermometer gets to 14° below zero? Why then is there any living peach trees in the State of Maine? In this town I believe the thermometer gets below 14° below zero every year, and more than half the years to 18 or 20 and yet there are peach trees in this town that have borne fruit for twenty years or more. Is 20° any worse for a tree than 10°? Is there any chemical or mechanical change produced upon ice by the temperature falling from 14 to 20 below zero? Does the sudden change from 18° below to 18° above zero (as occurred here to-day from 8 A. M. to 12 at noon) produce any deleterious effects? or even if it rose to 50 above, for then there would be no more sap in the cells than there was before it froze at all. It appears to me that should an extreme cold night occur in the fall before there had been much cool weather, the freezing of the sap in the vessels while they are full would burst them, even if they were iron; but we never find such an occurrence as this. The wise Architect has so established his laws that the sun recedes gradually, and cold weather comes on gradually and deprives the trees of their leaves and drives down a portion of the sap, so that what remains is not sufficient to burst the vessels by freezing; and why should the thawing burst them since it is well known that ice is more bulky than the water of which it was made. If freezing and thawing does the mischief we shall be sure to suffer spring and fall, for there is always much freezing and thawing at both those seasons.

It seems to me most probable that the mischief is done by heavy winds when the wood is frozen; wood in this State is very brittle; it will not bend much without cracking; the peach tree sends out long and slender shoots, which are much more affected by the wind than other trees whose limbs are shorter in proportion to their size. I set some peach trees several years ago the north side of my house—they died half way to the ground every winter, and finally died root and branch about five years ago. I set some the south side of my house, which have flourished well so far; these are well secluded from the winds, while those on the north were exposed to winds which most prevail here in cold weather. With regard to smoky chimneys, I think there would not be so much complaint if builders would attend to the brick-laying so as to be sure that the walls of the chimney, and the partition between the flues, should be perfectly air-tight. When my chimneys were built I requested the masons to be very particular to fill all the joints. Most of the surface is plastered, and they draw first rate.

Yours, respectfully,

S. A.

West Newfield, Me., Jan. 16, 1852.

REMARKS.—Our correspondent is referred to some remarks by us during the last month on the subject of peach blight and frost. It is still our opinion that the peach bud is not injured so much by the intensity of cold as by sudden changes.

The cause of nine-tenths of the smoky chimneys is, that they are constructed upon wrong principles. The back should be perpendicular, and the throat very narrow, say three to five and a-half inches—not over the latter distance in the largest fire-places. As soon as this narrow throat is passed, the back should suddenly recede five or six inches. Constructed in this manner, with flaring sides, and the top of the chimney contracted to about half the size of the flue, there will be little danger of the chimney smoking.

For the New England Farmer.

FLOWING CRANBERRY MEADOWS.

MR. BROWN:—Reason and experience would seem to indicate that cranberry meadows should be flowed for two reasons, viz:

1. Flowing disseminates the seed, especially in such meadows as are comparatively new or the vines thinly set. The water carries the cranberries about and deposits them where the vines are wanting, and this seed creates more vines and causes them to spread.

In the fall of 1850, we sunk a gravel dam across the lower end of our cranberry meadow, say twelve rods long, and left a passage for the water in the centre of the dam with a gate, and flowed the meadow, keeping the water on until the 20th of April following, and then let it off; the effect was to double the amount of cranberries the first year.

2. Water will leave a deposit that enriches the soil where it has stood, a considerable length of time, and then let off: that deposit was the cause of the increase of my cranberries. What else could it be? But does Dr. Shurtleff "controvert" the propriety of flowing cranberry meadows *absolutely*? I do not so understand him, at least he does not quite say it in his communication on cranberries of last week. He says keep dry by draining, &c., which I approve of—still I would annually flow for the reasons stated above. Also keep dry, he says, to prevent frost; but the water will prevent frost most certainly while it is on, and will have no effect to produce it we think when taken off.

FROM A SUBSCRIBER.

Uxbridge, 1st mo. 30, 1852.

AGRICULTURAL CAPABILITIES OF LIBERIA.—The soil is as rich as it is at the Cape of Good Hope, and peculiarly adapted for the cultivation of cotton, though since the colonists have commenced to raise it none has been shipped, but this is to be attributed simply to a want of means. It also produces coffee of a very superior quality, from which immense wealth could be derived, if extensively cultivated. Rice and tobacco have also been sown with the best results. It is stated that several manufacturing firms in England have united in an enterprise to test, by actual experiment, the possibility of procuring cotton in large quantities from the west coast of Africa; and have subscribed \$100,000 to carry out their objects. Hitherto the principal drawback has been a want of means.

For the New England Farmer.

THE HONEY BEE.

MR. EDITOR:—I wish to know if you can assign any reason why swarms of bees so frequently die in winter, and sometimes in other seasons of the year, without any apparent cause. There have been a number of cases about here, in which plenty of honey was found in the hive, and not the least appearance of worms, or of being killed by other bees or insects. I have just seen two such cases; one was a last year's swarm, the other was a year or two older. I should also like to know if there is any way to prevent their dying in this manner.

Yours, &c.,

A SUBSCRIBER.

Groton, Jan. 31, 1852.

REMARKS.—We have heard the same complaint several times within a few months. Although keeping several swarms, we have suffered no damage in the way spoken of above. Our destructive enemy is the moth. If a swarm becomes weak, that is, few in number, it is said that it is pretty sure to die during the winter, even if plenty of honey remains in the hive. In such cases they usually seek preservation by joining a stronger and more populous swarm before cold weather sets in. Perhaps some one who has had much experience can answer the questions of our correspondent, and we hope will do so.

PROFITS OF A SMALL DAIRY.

MR. EDITOR:—Several of your subscribers have told us of their success in raising and fattening pigs—one writer giving, at the same time, an account of the profit, or rather what the pork cost by the pound. If agreeable, I will give you an account of the profits derived the last season from two cows and three heifers—two of which were four years old, the other two years old.

Two calves sold at about a week old, at \$1 each.....	\$2.00
Two calves, sold at \$4.25 each.....	8.50
One heifer calf raised, which I value at.....	5.00
Sold the proprietor of the U. S. Hotel, Portland, 598	
lbs. of butter, for.....	99.33
18 lbs. butter, sold in small parcels, to others.....	3.00
Cheese sold.....	10.49

Total..... \$131.32

Then we must notice the amount of butter, cheese, milk and cream, consumed in a family of five persons, together with a hired man about one-half of the time, through the summer. This we will suppose to be equal to the yield of the two years old heifer and one of the others. If so, then we have a profit of one hundred thirty-one dollars and thirty-two cents from three cows, and one of them only four years old. This will give a fraction over forty-three dollars per cow, to say nothing of the milk, buttermilk, &c., known to be valuable as food for swine.

One of my cows and two of the heifers are a cross of the Durham short horn and native breeds, and the others I suppose to be pure natives.

My rule is, in winter, to give the cows as much good English hay as they "will eat up clean," salt, a plenty of good water and warm shelter. In summer, a good pasture, careful not to overstock;

and the benefit of early fall feed, whatever may be said to the contrary.

You will see, by the above statement, that I received only 16 2-3 cents per lb. for my butter. This was owing, in part, to the crowded state of the market at the time. Had I received 20 cents per lb., the profit, per cow, would have been something over fifty dollars.

In conclusion, I will merely say that I have as yet made but little progress in improvements, nor would it be the part of wisdom to promise too much; but perseverance in a good cause we think is rather laudable.—*Maine Farmer.*

FARMERS' CLUBS.

Now is the season for farmers' clubs to hold their meetings. Nothing has yet been devised more likely to advance the best interests of agriculture, than farmers' clubs. Every district has a school house, and such meetings may be held without expense. If the farmers of a neighborhood get together and spend a single hour at a conversational meeting on agriculture, some good result is sure to follow. The conversations at these meetings should not be conducted diffusely, but a chairman should be appointed, a subject chosen, and such members as choose to speak should address the chair on the subject of the evening, and in this way the reading and experience of all present will become the common property of the neighborhood. We have attended many such meetings, and never without learning some new and valuable fact.

Winter evenings are long, and at this season of the year, when the farmer is not required to rise as early in the morning as in summer, he can sit up to a later hour, if necessary or profitable, and therefore should, as often as once each week, meet his neighbors to communicate and receive information. A farmer must have been slothful indeed, if during the past year he has not learned one new fact in relation to agriculture; and should a hundred neighbors meet and each communicate one new fact, then each will learn ninety-nine new facts for one communicated. Those who repudiate the use of books, could have an opportunity of learning without their use, and they need not fear being deceived by some ingenious theorist—for with 100, or even 20 farmers present, the theorist would find it difficult to propagate an error, where all felt free to contradict his views.

Merchants, manufacturers and mechanics hold such meetings, and why should not farmers? Can any one man working alone on his farm, learn as much as 100 men? May not each discover some practical fact, and should not his neighbors know it? How else can the improvements of the day be made known?

Take your sons and workmen to these meetings, and they will learn to respect an employment which calls into active use the talent of all. If you have a sick animal, you may have advantage by the experience of all your neighbors, and probably save the life of the animal. If you have excess of crops, such as are usually used on the farm, or are short of others, may you not at such meetings learn where you may sell or exchange? Do not such meetings tend to soften asperities, cement friendships, and do away with peculiarities of tem-

per, which always occur with men who work alone? We would sooner forget much of our reading, than to lose the recollection of such practical improvements as we have been acquainted with at farmers' clubs.—*The Working Farmer.*

FIFTH AGRICULTURAL MEETING,

AT THE STATE HOUSE, FEB. 10, 1852.

Subject for discussion—MANURES.

HON. AMASA WALKER, of North Brookfield, presided at the Agricultural meeting on Tuesday evening. On taking the chair he said that the subject for discussion was the most important of any connected with farming. If the scholar is asked, what is power, he will reply, knowledge; if the same question is put to the political economist, he will reply, money; and if it is put to the farmer, he would say *manure*, for with it I can do anything, and without it I can do nothing. This statement is emphatically true in regard to New England, where all the fertile properties of the soil have been exhausted by long tillage. Manure is our only resource for renovating and restoring those properties. To illustrate this fact he mentioned an experiment of his own, the result of which was, that from a piece of land which five years ago yielded but three-fourths of a ton of hay, he now cuts seven-and-a-half tons of excellent quality. In producing this result there was no mystery. It is only what every farmer may do by a judicious application of manures. It is what might be done on almost every acre of land in Massachusetts, if farmers could but get manure sufficient. But here is the difficulty. Manure is scarce. The amount of natural manure is limited, and thus the farmers are thrown back upon other resources. The great question is, then, how can the quantity of manure be increased? Farming has been justly defined to be the science of manuring. If this is so, what does this science teach us? It teaches us, *first*, to preserve our natural manure; *second*, to augment the quantity as far as we can by means within our reach on the farm; and *third*, to adapt our manures to our soils. First, as to preservation, manures are of two kinds, solids and fluids. In former days the latter were considered of but little if any value, but now they are generally considered to be as valuable as the former. All are now persuaded of the necessity of cellars under barns, or of sheds where their manures may be covered up, and preserved from the exposure to the sun and rain. Formerly, he believed one-half of the value of manure was destroyed by being thus exposed before being taken on to the ground. As to augmenting our natural manures—he said nature has provided abundant resources in our meadows of peat and other substances. This muck he would bring up, and expose it to the atmosphere for two years, and then place it in his barn cellar to ab-

sorb the liquids, and form part of his compost heap. There are many resources of this kind for which farmers should keep a watchful eye. As to the application of manures, reason tells us that different soils need different manures, and this fact science proves. This is one of the most important considerations connected with the subject. This knowledge of the application of manures is all important, and there is no correct way of obtaining it but by an analysis of the soil. But few understand how to do this. There is no general system to tell us how to restore our worn-out pastures and other lands, and therefore we need the light of science upon this point. At this point, science comes to our aid, and by analyzing the soil, tells us what ingredients are wanting and what manures to apply to supply those ingredients.

Mr. FRENCH, of Braintree, said the subject of the acquisition of fertilizing matters and their judicious application to the soil, is one second in importance to no other, to the people of Massachusetts. Without this fertilizing matter we should make but poor headway. This, in some cases, is expensive. He had found by inquiry, in different sections, that the expense when a full cord in bulk was obtained, would not vary far from \$7 per cord. A cord carefully measured would contain 103 bushels; liberally measured, 100 bushels,—making it cost 7 cents a bushel. From this estimate, farmers could see the cost of their manures, and judge in regard to the profit of applying them in large or small quantities. Farmers ought to turn their attention to the accumulation of manures in every possible way. Most farmers carry out the manure from their yards between the 1st and the 11th of May. The yards are scraped perfectly clean, and the droppings of the cattle which are thrown out between that time and the time of turning out the cattle (usually the twentieth of May) is mostly lost by its being exposed to the rays of the sun. There ought to be a covering of muck spread over the yard. The same course should be adopted in regard to the piggery, the privy, &c. In regard to the application of manures, he had tried various quantities. He had put on twelve cords to an acre; but this he thought was too much. He would put on less and plow more. He was strongly in favor of a thorough subdivision of the soil. He had used bone dust as a manure on light sandy soil—(30 bushels to an acre) with great results. He had also found his account in sowing six or eight bushels of refuse salt to an acre. It operated well in destroying worms. In his region, on the sea-shore, no benefit had been experienced from the use of plaster.

Mr. BRIGHAM, of Westboro', did not believe the people of Massachusetts were generally so ignorant in regard to the adaptation of manures to

soils as the chairman had intimated in his remarks. He believed that so far as stable manures were concerned they might be advantageously applied to all soils. He would allow that they might be injudiciously applied. He did not believe that the farmers of the State were obliged to cultivate the same amount of land from year to year and that they were not able to increase this amount—but he did believe that the farmers of Massachusetts might, by judicious management, be increasing their amount of manures annually and at the same time increase their crops, stocks, &c. He was in favor of cellars under barns. The system pursued in his town, where most of the farmers were engaged in keeping stock for milk,—and which had resulted in enabling the farmers to increase both their stock and their crops—is to keep their cattle in the barn all winter, and to keep them tied up during the summer nights. In this way a great saving of manure was made. In conclusion, he asked for information in regard to the best mode of treating lands which lay so that it is difficult to get manure on to them, such as worn out pasture lands. He had made one experiment, of plowing in a crop of buckwheat, but obtained no benefit from it.

Mr. SIMON BROWN, of Concord, said that in some cases it was as important to tell what we ought not to do, as what should be done. He once had a conversation with a person employed to enrich a piece of ground around a public building for the purpose of setting out shrubbery and trees in it. This person said he had purchased the manure of a stable for a year, to which he intended to add a number of casks of lime in order to "cut up" the whole and bring it into a fine compost, and inquired whether this would not be the true course to pursue. Mr. Brown thought it would be injurious. The gentleman seemed surprised at this, and thought lime might be applied to advantage. He did not understand that all animal manure contains a certain amount of nitrogen which the application of lime separates from the manure and allows it to escape. But lime may be used in small quantities on coarse vegetable substances which need to be reduced before they can be conveniently applied to the soil. Another important matter is too often overlooked. When the compost heap is overhauled, or moved, it should not be allowed to remain uncovered one hour. People would be surprised were they to spread a sheet over a heap left uncovered over night, to see what collects on it during that period. Where manure is hauled out, and left uncovered, it will lose a large portion of its fertilizing power in a few days. He referred to old Jethro Tull's theory, that with constant stirring and pulverizing of the soil, manure might be altogether dispensed with. This, he said, was of course an exaggeration, still, with more perfect tillage much less manure would be required. A well

pulverised soil would absorb the dew and fertilizing substances from the atmosphere, which could not penetrate a hard-crust soil. He showed, by the relation of an incident which came under his own observation, how a limited and partial knowledge of this subject would lead a man into a wrong course of practice. What we want, he said, in conclusion, is, that these plain truths shall be better and more thoroughly understood; that our farmers shall know how to *save* their manure when they have once obtained it.

Mr. Brooks, of Princeton, would place science, in its application to farming, not in the first, but in the second place; practice should come first; by this practice we should get our facts and build our theory or science upon them. He believed that one spear of grass would produce another, and that two spears would produce three others, &c. So he believed that one pound of hay would produce two and a half pounds of solid manure, and chemists say that the liquid will be of an equal amount. If this is so, there will be five pounds of manure from one pound of hay; upon this ground he argued, that every farmer possesses fertilizing matter enough, and more than enough to keep his land in good condition, and still to sell one-third of his crop. He had used plaster in renovating his lands—applying 100 lbs. to an acre. This he had done for some years without seeing any good effects from it; but in the fifth or sixth year he got a very good crop of clover. Barn cellars he thought saved one-third of the manure. Where he formerly used 24 cords, he now uses 16 cords. As an experiment, he had this year covered his cow-yard, and thought the result so far had been good. He thought composting in the field is best. His compost heap generally weighs 48 lbs. to a cubic foot; and when kept over one year, 43 lbs.—whether this is a loss in the power of production, or mere weight, he could not say. Hogs he thought might be made great sources of manures. He tried an experiment with a pig weighing about 140 pounds, and the result was that he produced seven pounds of manure in twenty-four hours. This would bear composting with meadow muck on the ratio of one to 4 or 5—and make a rich compost. Four pounds of meal he said would make a pound of pork.

Mr. Coffin, of New Hampshire, defended science as applied to agriculture from objections sometimes urged against it—and advocated its benefits to farmers. He doubted the correctness of Mr. Brooks' statement, that one pound of hay would produce five of manure. A part of it would be consumed in forming the bones, flesh and muscles of the animal. Bone-dust he thought could be advantageously used on lands which require phosphoric acids; plaster on lands which need sulphate of lime, but not on those which contain sulphate of iron. Guano contains scarcely a particle of mineral substance. It is mostly ammonia and unless

covered up immediately its virtues will be wasted upon the atmosphere. He approved of Mr. Brown's views in regard to the application of lime. It sets the ammonia free in animal manure and allows it to go off in the atmosphere enriching the farmers neighbor as much as himself. It is useful to decompose swamp muck, and also to neutralize the effects of sulphate of iron—which is often found in rocks in our fields and pastures.

Mr. HOLBROOK, of Oregon, made a few remarks relative to the great Agricultural resources of the country, and was followed by

Maj. WHEELER, of Framingham, who, in reply to Mr. Brigham's question, how best to restore pasture lands, recommended the use of plaster, at the rate of two bushels to the acre. The meeting then adjourned.

The subject for discussion on Tuesday evening next is *Farm Stock*. Hon. EDWARD EVERETT will preside.

A MOWING MACHINE.—The Poughkeepsie Eagle says that a machine for mowing, manufactured in the western part of this State, has recently been introduced into Dutchess County, which will probably prove of great advantage to farmers. It is warranted to cut and spread an acre an hour of any kind of grass, with a pair of horses, on all lands free from obstructions, and do it as well as it can be done with a scythe by the best of mowers. The machine is simple in its construction, and can be managed by any boy capable of driving a pair of horses. It is highly recommended by a large number of farmers who have used it with success in the western and central part of the State.

✂ We have received a note from an esteemed correspondent, (*) in relation to the closing part of the meeting at the State House, on the 2d inst., and perfectly agree with him when he says—"I thought the best way to notice them was *not* to notice them at all!" We shall be glad to have a personal interview with our correspondent.

He closes his note by saying—

It struck me that the remarks of most of the gentlemen who spoke at this meeting, were to the point, and highly appropriate. It was surely proper to illustrate the application of the principles of science, to the ordinary purposes of life. And also proper to point out distinctly, what is to be asked of the Legislature. The subject has been long enough under discussion to come to a point. And it is to be hoped that no *flaw* will spring up to capsize the *barque*, which now seems so near the haven of safety.

February 5th, 1852.

✂ The Duke of Northumberland has ordered the construction of a thousand cottages upon his estate in Northumberland, for the accommodation of the working classes.

For the New England Farmer.

N. Y. STATE AGRICULTURAL SOCIETY.

BY WM. BACON.

[From our esteemed correspondent, W. BACON, Esq., Richmond, Mass., we have received a particular account of the *Winter Exhibition* of the society mentioned above. Having received and published an account of it already, we omit a portion of the one before us, but give the remarks which follow his description of the exhibition.]

Among the thousand and one interesting things which gave beauty, spoke of utility, and added interest to the exhibition, were models of fruit, the leaves and wood of fruit trees and vines, and insects that depredate thereon, prepared in plaster by Townsend Glover, of Fishkill, N. Y. Of these he presented some 160 of apples; 160 of peas; 60 of strawberries; 80 of plums; 30 of cherries; 19 of gooseberries; 5 of apricots; 11 of nectarines, &c. &c., all so natural in form, color, and indeed every peculiarity, that the most fastidious connoisseur could not help fully recognizing in them the faithful portraiture of the varieties they represented. Mr. Glover is entitled to much commendation for the aid he is thus giving the Pomological world, in helping them readily to settle the nomenclature of fruits, and we hope our horticultural societies will help themselves and him, by introducing sets of his models into their cabinets.

The officers of the society for the ensuing year were chosen at this meeting, and are, Henry Wager, of Oneida, President; E. Corning, Jr., of Albany, Recording Secretary; B. P. Johnson, of Albany, Corresponding Secretary; Luther Tucker, of Albany, Treasurer; and Utica was designated as the place of holding the next fair.

The continued and increasing prosperity of this society must be a matter of strong congratulation to every farmer that has a decent respect for his profession through the land. Why should it not be? It is the lever that is moving and is to move effectually the agricultural destinies of the nation.

But it is not to these exhibitions alone that the society may look in truthful trust for the secret of success or the triumphs of a wide-spread influence. The volume of transactions she annually sends out among the people, telling the tale of truth wherever it goes, must, though noiseless in its operations, accomplish a work which no other means can effect. Who can look upon its plates of prize animals and not see that there is a degree of perfection to be attained in raising stock that he has not approached. Do not say you "*can't do it*," brother farmer. You are unworthy of the name of farmer until you have made a decided, persevering trial. It is just such farmers as you are that hang like an incubus on our profession, to keep it in the back-ground and cause the tauntings of reproach to fall upon it. It is no wonder if your sons look with a species of contempt on the profession of their father, and hurry away from home to seek employment in the miasma of towns in some calling more honorable than that which your "*can'ts*" are daily bringing into disrepute.

Who, too, can read of the crops which thorough cultivation brings and not feel that his own glebe is susceptible of a higher state of improvement, or who can see or read of the richer fruits which in

their freshness fall to gladden the palate of his neighbor, and not feel constrained to exchange the little, sour, puckery crabs which his own matted topped, moss-embowered trunked trees produce for something to gratify his own taste? All these things and many more of equal or greater importance these annual volumes of transactions scatter information upon. They are a treasure every farmer ought to possess and read. The farmers of that State undoubtedly appreciate them. If they do not, we do, and would not willingly be without them.

Yours truly,
Edmwood, Feb. 3, 1852.

W. B.

For the New England Farmer.

PREPARATION AND USE OF MANURE.

BY A. G. SHELDON.

A practical farmer knows he needs all the manure he can conveniently make; and that in order to make it properly, a barn cellar is necessary. Let this cellar be a reservoir for all his manures, that they may be thoroughly mixed, and let this cellar be the home for his hogs, and his horse manure their bed. Let him add to the droppings of the cow, *fresh earth*, at least once each week, to absorb all the liquids; this will give fresh earth for the hogs which is quite beneficial to them even in the winter. If he intends his manure for upland, let him obtain his earth from the swamp, and previous to putting it in the cellar let it be exposed a sufficient length of time to the air and frost, that it may become thoroughly pulverized. If he wishes to use his manure in reclaimed swamp, let him take his earth from the sand bank. Early in April clean out the barn cellar, place the manure in a pile in a warm, dry place, mixing all the parts together thoroughly, leave it in the pile as light as possible, cover it with loam and let it remain until time to plant.

The preceding remarks have reference to the treatment of the manure collected in the winter.

In the summer, if your cattle lie in the yard, cover the surface of the yard with loam or pulverized meadow-mud, having reference to the land on which it is your intention to use it. Every morning throw the droppings of the cattle on the pile, covering them with double the quantity of the material with which the yard is covered; or if the cattle are tied up, be careful to add each morning to their droppings double the quantity of mud or loam.

Before the ground freezes in the fall, place the summer manure in a pile, or piles, near where you expect to use it, scraping up all the covering of the yard not used, and thoroughly mixing it with the piles, then cover the piles with loam, and this is ready for use at any time.

Now a few hints as to the application of manures. For a garden, spread the manure in the fall, and turn the furrows together; this covers all the manure and leaves hollows for the water to soak in to the earth without drenching the manure. In the spring you will find the manure decomposed and the soil thoroughly impregnated with its strength.

If the manure is to be used for corn, spread and plow in the coarsest, put a small quantity of the finest in the hill to give the corn the first start. This latter remark applies particularly to dry land.

If the land is not dry, first plow the ground, spread the manure, turn the furrows together and plant the corn (or potatoes) where the furrows meet. The above is intended to apply to old ground. If you wish to plant a piece of very wet grass land, spread your manure on the grass before plowing, turn the furrows together, plant where the furrows meet, which leaves the seed on the level of the surface of the earth.

If you wish to apply manure to a young orchard, the best way is, if manure is plenty, to spread over the whole surface and plow in; if you are short of manure, be sure and put what you have as far from the body of the trees as the feeding roots are. To apply manure near the body of a tree is as inconsistent as to apply milk to the skin of a calf instead of to his mouth.

A. G. S.

Wilmington, Feb. 11, 1852.

For the New England Farmer.

PETHISIO IN PIGS.

MR. EDITOR:—Can you inform a subscriber, what is the cause of pigs having the pththio? Is it a complaint they are by nature subject to? It must certainly retard their growth and fattening very much.

Can you inform me by what process the Shakers pulverize their thyme and other herbs, that we see in tin canisters?

A CONSTANT READER.

Jan. 29, 1852.

REMARKS.—The difficulty inquired about above, is undoubtedly occasioned by exposure. A large proportion of the pigs fattened in New England are brought from the West. They are often driven till nearly exhausted with fatigue, and then, without sufficient food to keep up the accustomed stimulus and warmth, they are obliged to remain through the night in bleak and perhaps wet places, where they not only contract colds which produce coughs, but rheumatic diseases which often deprive them of the use of their limbs. Pigs lying on plank floors with cracks in them where the wind comes up while the animals are sleeping, are very likely to have colds and rheumatism. Wallow as they will, there is no animal that likes a dry nest better than the pig; and if you intend to make anything out of him, in addition to good wholesome food, you must give him a comfortable bed to lie and digest it in.

The Shakers get their herbs pulverized at the "Forrest Mills," in Lynn.

TREES.—While we are cutting down our noble trees with a rapidity which posterity will deplore, a French chemist has been experimenting for five years to ascertain whether it will pay to stimulate the growth of trees by manuring them. It appears from his experiments that the residuum of soda and potash works, freely scattered in woods, will augment their productiveness one hundred per cent.

☞ "Ours is no common lot," as the hogs said when they got into the clover field.

For the New England Farmer.

NAMELESS POTATO.

MR. BROWN:—I have taken the liberty to forward to you a small parcel of potatoes, directed to the "care of Shaw, Provision dealer," No. 2 Cross Street, Boston. I do not know any name for the potatoes, and they are very scarce in this region; indeed, I do not know of their having been raised by more than one person besides myself in this vicinity.

The peculiarity of the potatoes is, that they come to maturity so early as entirely to escape disease, at the same time that they attain good size and remain perfectly fresh and sound through the winter.

I had but half a dozen of the potatoes three years ago, from which the yield last year, (the third planting) is about 45 bushels. The year before the last these potatoes were planted in the same field with Carter's and Chenangoes, and were every one sound, while both the last mentioned kinds were two-thirds worthless, on account of disease. For the whole three years these have proved perfectly sound. I think therefore that the use of this kind of seed comes nearer to being a prevention of disease in potatoes than any I have heard suggested.

Should you, on examination, think them worthy of attention, please notice them.

Very respectfully yours,

L. MATTHEWS.

Cornwall, Vt., Feb. 4, 1852.

REMARKS.—We are obliged to friend MATTHEWS for his favor; we will cook and plant some of the potatoes, and report progress. The potato resembles what is known in this part of our State as the Early White. It comes a little earlier than the Chenango, and is an excellent potato.

☞ To CORRESPONDENTS.—We are encouraged and strengthened by the increased interest so plainly manifested in our favorite pursuit. Agriculture is inviting into its service many of the best minds in the country, and these minds are seeking mediums of imparting the results of their investigations to the world. This interest is evident in the communications made on the various departments of farm husbandry, and the qualifications requisite successfully to pursue them. They have increased upon our table, and have been delayed, until we fear some of our correspondents may have become impatient. They are assured that their favors are not only appreciated, but that the beneficial influences of the paper will depend in a considerable degree upon them. We gather our weekly harvest from among them, as they seem to us most suitable for the time.

VERTICAL GATE.—The editor of the *Plow* may inform his correspondent at Osceola, N. Y., that the patentee of the Vertical Gate is Lorenzo Smith, of North Easton, Mass. The price for a town is \$10,00 for each thousand inhabitants.

Hogs.—The number killed at St. Louis up to Jan. 7, was 40,000 head.

At the different packing points on the Illinois river, the number killed up to the 4th of January, was 44,000, against 79,500 to the same time last year.

At Evanville, several thousand more have been killed than last season. Up to Tuesday last, 326,426 hogs had been slaughtered in Covington and Cincinnati, against 307,200 to the same date last year.

A correspondent of the *St. Louis Intelligencer* says that in Schuyler and Cass counties there have been packed this year 30,191 head, against 47,000 hogs last year.

The *St. Louis Republican* says:—We were informed yesterday by a gentleman engaged in the pork business, that there will be but little meat barrelled in St. Louis the present season. The principal cutting has gone into bulk sides for bacon. Hams, too, will be scarce, for principally they have been taken for Eastern account in sweet pickle.

Wendell Phillips says "we live under a government of men—and morning newspapers."

Horticultural.

FRUITS OF OBSERVATION.

BY PROF. FENNELL, IN THE JOURNAL OF THE HIGHLAND AG. SOCIETY IN SCOTLAND.

It is said that the occasional natural union of the boughs of distinct trees demonstrated the practicability of grafting, and that the observation of the circumstance of a vine shooting more vigorously after a goat had browsed on it, suggested the valuable art of pruning fruit trees.

In the sixty-third volume of *Philosophical Transactions*, we find it related that M. Mustel, having observed that some of the flower buds of an apple tree had been gnawed off by a snail in such a manner that all the petals and stamens had disappeared, being eaten close up to the calyx, which, together with the basis of the pistillum and the embryo, were left uninjured, concluded that those imperfect flower buds would bear nothing, but was soon convinced of his mistake. Nearly all of them bore fruit; the apples were perfectly formed, and six or seven pretty large ones were seen upon each bunch. On the other hand, the snail had spared some other bunches which it could not so easily get at; but out of ten or twelve flowers in each of these bunches, not above one or two showed any signs of fruit. This suggested to M. Mustel the idea that, when the flowers of trees are full blown, the prevention of the natural fall of the petals and stamens gives a greater assurance of the fructification—a fact which he several times proved; for having cut off with the scissors the petals of apple, pear, plum and cherry blossoms, close to the calyx he found that almost every one of them bore fruit, whilst several of the uncut flowers bore none. Thus did a snail teach him how to render a tree more fruitful.

One of the Emperors of China having noticed that a particular stalk in his garden produced better rice than the rest, cultivated it for several years; and, then, having fully satisfied himself of its superiority, he distributed its grains among them for their general benefit. A Sussex farmer having remarked that some gooseberry bushes, growing under an elder tree, were exempt from the attacks of caterpillars, was induced to try the efficacy of a decoction of elder leaves in destroying the grubs that infested his turnip crops, and he and other farmers who tried the experiment found it successful.

Rose.—Professor Agassiz, in a lecture upon the trees of America, stated a remarkable fact in regard to the family of the rose, which includes among its varieties not only many of the most beautiful flowers which are known, but also the richest fruits, such as the apple, pear, peach, plum, apricot, strawberry, raspberry, blackberry, &c., namely, that no fossils or plants belonging to this family have been discovered by geologists! This he regarded as conclusive evidence that the introduction of this family of plants upon the earth was coeval with, or subsequent to the creation of man, to whose comfort and happiness they seem especially designed by Providence to contribute.

Rose Insects.—If our lady readers are desirous of keeping their rose bushes free from the small green vermin that so frequently infest them, the following remedy will be found a most effectual one:—To 3 gallons of water add one peck of soot and one quart of unslacked lime. Stir it well—let it stand for twenty-four hours, and when the soot rises to the surface skim it off. Use a syringe for applying it.

Mechanics' Department, Arts, &c.

CURIOSITIES OF STEAM.

There is a question connected with steam which is more strange than any, and yet we seldom hear it mentioned. It is this: water at 212° gives off steam; this steam is totally different in its nature and action from water, and yet it is only 212° also. Why does not the water, at 212°, all flash in a moment, like gunpowder, into steam—that is, into 1700 times its original bulk? We cannot tell; we only know it does not do it. It has been proved by Faraday, however, that water perfectly purged of all atmospheric air, (which all water contains a portion of,) when heated to 300°, explodes instantly—that is, all flashes at once into steam. There is another property belonging to water not so universally known to engineers as it should be, namely, all the water in a boiler will become steam in a given time, when subjected to a constant heat and great pressure. If a certain amount of water, at the heat of melted ice, be put into a vessel, and a lamp applied to the same, it will be found that if the time occupied to bring the water from melted ice to 212° (the point where steam commences to be given off,) be noted, and the lamp kept at the vessel for 5 1-2 times longer, all the water will be changed into steam; it follows then, that if a certain amount of heat be applied to water, for 5 1-2

times the period it took to raise the temperature from that of melted ice to the steam point, all the water will be in a state to flash at once into 1700 times its original bulk. A cubic foot of water, converted into steam, occupies 1700 times the space it formerly occupied, if not compressed; and two cubic feet of water converted into steam, occupy a space of 3400 feet. The pressure exerted by such an expansive force is tremendous. If frozen water has burst cannons, is it to be wondered at that heat and water burst boilers? Every engineer should be thoroughly acquainted with all the known chemical and mechanical properties of water and steam. The observations of eminent practical engineers are very valuable; they are situated to observe the phenomena of steam, and there may be many not generally known.—*Scientific American*.

MAKING HOOKS AND EYES.

The *New York Evening Post* has a letter from a correspondent in Connecticut, from which we copy the following:

Upon the premises we were shown the works of the Waterbury Hook and Eye Company, where a capital of \$16,000 is employed in the manufacture of hooks and eyes. Here were arranged long rows of little machines about the size of small washstands, under which a constant shower of feminine conveniences was pouring down, but from what cause or what agency it was difficult to conjecture. Upon a closer inspection, a large spool of wire was perceived revolving slowly in the rear, growing shorter inch by inch in mechanical harmony with the machinery, while iron fingers curiously articulated were ready to grasp the severed fragment, and pass it along from change to change until it finally dropped into the receptacle beneath, a perfect hook or eye, ready for use.

For a moment it seemed as if each machine was instinct with life and intelligence. The power of speech seemed to be all that was wanting to complete the delusion. There were but four or five men in the room, who passed around occasionally from one stand to another, to oil the machinery, to supply new wire when the previous spool was consumed, or to empty the vessels when filled by the silvery shower. The whole performance more resembled the voluntary process of nature than the result of mechanical art.

The duty of the superintendent of one of these machines seemed to me curiously alike to that of the gardener who plants his peachstone, which, after many days, sprouts, grows into a tree, blooms, and finally bears peaches, which, when ripe, drop from its branches, and are gathered for use.

PAGE'S ELECTRO MAGNETIC ENGINE.

It will be recollected that Congress gave \$20,000 to assist Prof. Page in perfecting his application of Electricity to Locomotion; and it appears from the following testimony of "Prof. James J. Mapes, consulting Engineer," that steam may yet have to give up to lightning, in the matter of steamboats and railroads. He says:

"After combatting against the friends of Electro-Magnetism for many years, I do not willingly give up my preconceived notions on this subject, and it is only after due investigation that I am constrained to say that Dr. Page has fully suc-

ceeded in demonstrating the practicability of his invention.

Admitting the success of Dr. Page's engine to be attained, its advantages are numerous and invaluable.

The cost will be less than a steam engine of the same power.

The weight will be but one-quarter, if boilers and contents be taken into account.

The expenses of firemen and engineers are dispensed with.

Buildings, and stocks of goods and vessels, may be more cheaply insured than when steam engines are used, as there could be no risk from explosion or fire.

The expenses of Dr. Page's engine are only active while the machine is positively in action, whereas, an ordinary steam engine continues its expenses whenever the fire is burning.

Dr. Page's engine, if used ten times during the day, of six minutes each time, would have but one hour's expenses for the day; whereas, a steam engine, under similar circumstances, would be subject to nearly or quite the full expenses for fuel for twenty-four hours, or equal to the expenses of continuous work.

RUSSIAN SHEET IRON.

Russian sheet iron is manufactured by Mr. W. Deves Wood, at the McKeesport Iron Works, a few miles above Pittsburgh, on the Monongahela river. It is described as a beautiful article, with a smoother surface, a finer gloss, and a richer color, than any sheet iron made in Russia.—*Ex.*

The process of making Russia sheet iron has long been kept a secret. A few years ago, a person made application to Mr. Burke, then Commissioner of Patents, to see if he could not be protected in its manufacture, as he had discovered the secret. In England he could have secured a patent; our patent laws afforded no protection to the introduction of a new art. Mr. Burke mentioned in his report, that it would be well if some protection could be afforded to the introduction of such a useful art; we entertained the same views, and do still. We know nothing about the manufacture of the iron, except what is stated in the above extract, but we have been told frequently that the process was a very simple one, when understood.—*Scientific American*.

IMPROVEMENT IN PERMANENT MOULDS FOR CASTING.

—Mr. Nathan Mathews, of the firm of Edwards, Morris & Co., of the city of Pittsburg, Pa., has invented and taken measures to secure a patent for a most excellent improvement in moulds for casting. There is a great deal of difficulty attendant upon the casting, in permanent moulds, of articles requiring dovetails, and similar tongues and recesses in them, owing to the difficulty of separating the article from the mould; this improvement obviates this difficulty in a great measure. The parts of the mould which form the cores of the dovetail of a circle plate of a lock, or door knob, made of glass, porcelain, stoneware, &c., can be withdrawn easily, and so can all the other parts. The improvement will effect a great saving in the casting of such articles, both as it respects the producing them more sound, and the saving effected by obviating the damaging of work.—*Scientific American*.

DURHAM COW AZALIA.

This cow took premium as "the best cow over three years old," at the N. Y. State Fair last autumn. In many sections of the country the "Short Horns," of all kinds, are only known by the name *Durham*, although the Yorkshire, Lincolnshire and Alderneys are included under the term "Short Horns." For a long period the counties of Durham and Yorkshire, in England, were celebrated for their short horn cows, and particularly on account of their reputation as extraordinary milkers. In the description of Youatt, of the short horns, in speaking of their milking qualities, he says "it may be asserted on the best evidence, that, as a breed, they have never in this particular been equalled. Speaking of the breed, generally, he says that they were of large size, thin-skinned, sleek-haired, bad handlers and rather delicate in constitution; that they were slow feeders, producing an inferior meat, not being marbled, or mixed fat and lean."

If this description was *once* true, these cattle have wonderfully changed; for we certainly find the reverse of all this now, as far as beef is concerned. We believe the opinion is prevalent that the short horns do not lay on fat quite as fast as the Devons, but that they furnish some of the best beef we have in the market, cannot be doubted.

As milkers, the short horns stood very high some years ago, and particularly at the South; but as the Devons have become better known, they have, in a considerable degree, gained upon them in public favor.

It is our intention to give portraits from time to time, of some of the animals which have been considered good specimens, but not to express

decided opinions of their comparative merits in these cursory notices.

SIXTH AGRICULTURAL MEETING,

AT THE STATE HOUSE, FEB. 17, 1852.

SUBJECT FOR DISCUSSION—*Farm Stock.*

The sixth meeting was held last Tuesday evening, Hon. EDWARD EVERETT in the chair.

Mr. EVERETT, on taking the chair, made a beautiful and eloquent address, of which we have room to give but a very brief synopsis. In commencing, he said, he did not take the chair either as a practical or a scientific farmer, but rather in the capacity of a citizen deeply impressed with the importance of Agriculture as the great leading interest in the community—that interest which not only clothes and feeds the rest, but which is also the great depository of political power. The subject of *Farm Stock* is a great and important subject—one of the most important connected with agriculture. To show its importance, the eloquent gentleman first viewed those departments of husbandry which relate to the tilling of the soil, and the use of farming implements, showing what they had to do with inorganic substances, with mechanical properties and with chemical affinities. From this he passed to crops, which he said was advancing one step higher, and then to the subject of the evening's discussion, *Farm Stock*—which he said raised us to a still higher range of ideas and brought us to the consideration of one of the greatest mysteries which the mind of man can contemplate. When we discuss the subject of farm stock, we have to contemplate the nature, laws and requirements of the vital agency and intellectual instinct, so to speak, which distinguishes the animal from the vegetable

creation. He believed there was no more striking proof of the goodness of Providence to man than is displayed in associating with him, as has been done, the inferior animals. He supposed the time was, when the families of domesticated animals, such as the horse, the ox, the dog and others, existed in as wild a state as the buffalo and the tiger—they were as wild but not so savage. Now what had guided man to the selection of some eight or ten or twelve of these families or races which time and patience could domesticate? It could only have been done by wisdom from above. That there is ultimate relation between man and these races of animals, we see by a thousand striking facts. He mentioned, especially, vaccination, a mild and gentle disease, which we take from the cow, and which is almost an infallible safeguard against one of the worst maladies to which the human race is exposed.

From the nature of these domestic animals, as he had attempted to indicate it, he drew two practical deductions:—First—inasmuch as these animals have, in some respects, a nature similar to man, it follows that they are subject to laws of health analogous to those applicable to us. So if the farmer would keep his stock in order either for work, milk, or beef, he must keep them in good health, and the necessary means must be used as well as in the case of man. It is no more possible that animals can do their duty when in an unhealthy state, than it is for man to do his duty in a similar state. He would not say that the fibre in animals was as tender as in man, but they do feel to some extent the causes which operate on the health of man. The horse requires good food, proper shelter, and pure atmosphere to enjoy health, as much as a man.

One other consideration was that these animals which compose our inferior family household (so to speak of them) have not only the same organic nature, but have the same nervous system, and are sensible to pain as much as man. He mentioned as a striking fact, the circumstance, that though Providence has not given to the inferior animals the power of speech in which to describe their sufferings, man, who has this power, is driven in his intensest agonies to utter his feelings in inarticulate groans; and thus both man and beast give utterance to their feelings in the same way. They are entitled to the same treatment. The man who would treat a beast unkindly and cruelly, he said was no man—but at heart, a brute. These humble members of our family are sensible to kindness as well as to pain. They know when they are well treated, and exhibit their gratitude for it. He wished for no better test of a thoughtful, prudent, considerate farmer, than the manner in which he treated his farm stock, and he would rather go to his final account like the poor Indian whose religion taught him that after death he

shall enter the happy land with his trusty dog, than as the Christian who goes to church on the Sabbath, and on the week day cruelly beats his faithful ox with a walnut whip handle, or whips his over-worked horse till the strained tendons are ready to snap from their attachments.

Mr. J. W. PROCTOR, of Danvers, was the next speaker. He said the care of the stock on the farm necessarily engrosses a large share of the farmers' attention through the year. When we reflect that it takes very little more feed, and no more labor, to take care of a good animal, than a poor one, the benefit of care in the selection of animals will be so apparent, that no one who once understands it, will ever be inattentive to it. Take, for instance, a stock of cows that yield on an average 2 gallons of milk per day, through the 8 months of their milking season—which is as much as can be averaged of dairy stock generally, upon our farms, and suppose this quantity to be increased to three gallons, will it not be apparent that the last product would be a thriving business—where the first might afford but a scanty living to man and beast? Very many go on month after month, and year after year, without any particular inquiry or examination into these things. I have known a cow to be milked through the season, and highly estimated for the *quantity* she gave, when in fact, for the purpose for which it was used, her milk was of little or no value. The farmer should be as careful in testing the *quality* of his milk, as the *quantity*, and should never keep a cow, that does not give milk of the quality that he wants. Those who are experienced in these matters, can probably form some opinion, by the *form* and *appearance* of the animals; but the better way of judging, is, by *actual trial* of their milk. This done, there can be no mistake. I know dairy stock, that have been regulated upon this principle, where the produce has been increased *twenty-five per cent.*, at least, in the course of two years.

The same care that improves the dairy stock, the most important branch of stock upon our farm, can be applied with equal benefit to other branches of stock. I know a farmer who has for years been attentive to rearing and disciplining working cattle—the consequence is that his cattle, at four years of age, will command *thirty-three per cent.* more than those reared without such care. In a word, to ensure success to the operations on a farm, whatever may be the department of labor, vigilance and care are necessary; where these are applied—the consequence will be certain—where they are wanting, the consequence will be equally certain, though of a character entirely different.

A very small proportion of the farmers, in the eastern part of Massachusetts, raise their own stock. Their herds are generally replenished by the purchase of two-year olds, that come in, in the

autumn droves, from Maine, New Hampshire and Vermont. A full grown heifer with calf can be purchased from these for twelve or fifteen dollars—when it frequently happens, that the farmer can sell his calf, at six weeks old, if it has been properly fed, for about half this sum. Consequently a great saving is made in procuring his animals, provided they are of quality as good. The maxim, that "a good cow may have a bad calf," is one of our earliest nursery lessons. That there is a marked difference in the breed of animals, there can be no doubt; but that the peculiar properties of stock are dependent, quite as much upon the *male* as upon the *female*, there is as little doubt. In fact, the concurrent testimony of those who have given best attention to the subject is, that if you would secure the superior milking properties of a particular class of animals, look well to the Bull. I remember a practical illustration of this. About twenty years since, Mr. Pickering, then President of the Agricultural Society, made a present of an Alderney Bull, to the society. He was stationed in the best farming region, under the care of Mr. Newell, one of the best farmers of the county. His progeny spread in the neighborhood by connection with the cows of the neighborhood; and upon the testimony of Mr. Newell, the peculiar milking properties of the race, are still distinctly observable, in that progeny. This, we understand, relates to the *quality*, more than the *quantity* of the milk. It is said, that *six quarts* of the milk of a well fed Alderney Cow, will make a pound of butter (where it will require 12 quarts statute measure) of cows generally. For those who are fond of rich milk, and make use of small quantities, say, not exceeding *one or two quarts* daily, it becomes an important inquiry, what is the character of the cows that produce the milk? The probability is, nine out of ten, who purchase milk, never think of instituting the inquiry. With them, *milk is milk*, and there is the end of it. Whoever has any regard to his own comfort, or loves a good cup of coffee, will not fail to notice these things. There are those, who, in selecting their cows, as well as other breeders, have regard chiefly to *symmetry of form*, and *grace of movement*, and nine chances out of ten such connoisseurs will catch a tartar. Give me the mother, that bears healthy and vigorous offspring, and nourishes them well, in preference to all others. This rule is equally applicable to all mothers.

Mr. MOTLEY, of Jamaica Plains, made some statements in regard to the Alderney or Jersey stock, which has been recently imported by the State Society, and which is under his care. Some farmers feared that they would not stand our cold climate, but they have thus far borne the weather as well as other breeds. He had as yet put them to no test as regards their butter-making qualities, as they have not been here long enough to make a fair trial.

Still he could say that there was one, a four-year old, which calved last May, and which some eight weeks after calving, gave an average of 14 quarts strained milk, (beer measure) of the richest quality, per day. There was also another, a heifer, which calved when two years and two months old, and gave nine quarts a day while the calf was sucking, and a few days ago gave seven quarts a day. She calved on the 26th of June last. In regard to a statement which has been made that the average yield of cows in this commonwealth is but four quarts per day, Mr. Motley said the average yield of his herd of 13 cows was for the entire year of 1851, 6 1-8 quarts per cow a day. He thought much depended upon the care taken of cows whether they will yield a large amount of milk. They should be well housed, and treated with kindness. The Jersey cows he had fed through the winter with the cheapest kind of shorts and linseed meal, giving them about five quarts twice a day. With this mixture they get about thirteen quarts of water.

Dr. GARDNER, of Seekonk, spoke in high terms of the Galway or no-horned cattle, which he had kept with much profit. He believed cows of this breed to be the best of any for milk.

Mr. SIMON BROWN, of Concord, said he believed the means of improving our farm stock to lie within the reach of all who desire it. He thought well of introducing foreign breeds and testing them, and that a judicious crossing with several of them would prove advantageous to our common stock. Even some of the imported breeds, the Short-horns, Devons, or Ayrshires, he thought might be better adapted to our climate and manner of keeping, by mingling with it a portion of our "native blood." In regard to our common stock, he said he believed that after all it was about as good as any with which he was acquainted. The true test of this must be, not in selecting some two or three cows of either breed, but by selecting a herd of fifty or one hundred of our common stock, and then choosing as many of the imported, or those having a cross of them, all from the same neighborhood, grazing upon similar pastures, and treated alike in all respects, and our native cows, he thought, would show as favorable a result as any other breed which has been introduced among us.

At the Show of Middlesex County last fall, he saw some of the finest native cows he had ever seen—being large, possessing fine points, and yielding a great flow of milk. In regard to fixing the standard of the number of quarts of milk to a pound of butter, he did not think it could be satisfactorily approached, because cows vary so much in the *quality* of their milk. The cheap and easy way to ascertain which are the best cows for the dairy is by the lactometer, which is simply a glass tube graduated so as to show the proportion of cream which rises. He doubted whether cows through-

out the State came up to an average of *four quarts* a day during the year, and this result would be found owing in no small degree to the manner in which they are kept. The opinion still extensively prevails that the *cheapest* way, for the time, is the best—that cows in calf, and dry, may be kept just as well upon meadow hay, with an occasional foddering of something better. He believed that the profit of cows during their milking season in summer depended very much upon the manner in which they had been wintered. There should be more regularity in tending them; attention should be reduced to a system. Cleanliness and an even temperature are also important. To show their sensitiveness to a change of temperature, he stated that a friend had told him that his cows, 28 in number, had shrunk eight quarts by having the barn doors open on a cold day, during the time they were engaged in stowing away a load of hay, being a little less than half a pint to each cow. He was strongly of the opinion that a manifest improvement may be made in our common stock, even without the aid of foreign blood, by plenty of good feed, at proper times, and by uniform kind care. In conclusion, Mr. Brown wished the laws might be enforced against the barbarians who daily maltreat their animals in our streets.

Mr. BRIGHAM, of Westboro', expressed the opinion that dairy stock is the only stock which the farmers of Massachusetts can raise with profit. In his vicinity farmers keep cows for their milk to sell, and they have animals, a class of the Durham, which produce sixteen quarts per day when in full flow; some even go as high as 20 or 21 quarts, but these latter are not common. He thought cows in his vicinity would average as much as Mr. Motley's—6 quarts per day. Farmers in his vicinity expect to sell \$50 of milk from a cow a year. In some dairies they average \$70, and that without using the "iron-tailed cow." There is none of that breed, he says, in his vicinity. He believed that by careful selection, and proper care in breeding, we can in a few years be sure of a generation of cattle which will be truly valuable. He had tried this method with good results.

Mr. SHELDON, of Wilmington, said we can raise our heifers cheaper here than we can get them from Vermont and New Hampshire. To prove this he went into a calculation of the expense of raising a two-year old in Massachusetts and in Vermont, the result of which was that the Massachusetts farmer would make \$3 by raising his own heifers. Steers can be raised cheaper in Vermont or New Hampshire—and a good two year old heifer raised in the vicinity of Boston will sell for enough to buy a pair of two year old steers. He could sell 50 cows to-day for \$50 each, if he could find those which are worth it. In raising stock for the dairy, great kindness should be used. The native breed he believed as good as any. He had

crossed the native with the Ayreshire, which he believed to be the best milkers of any imported breeds. The great trouble with them is their teats are too small. For cream and beef the Durhams are good—of the Devons he had a very poor opinion. For pigs he preferred a cross of the Suffolk with the Middlesex, or Hampshire, to a pure Suffolk. He could not raise so many pigs with full blooded Suffolk sows as with those of a mixed breed.

A letter from Col. NEWHALL, of Essex County, was then read, detailing his experience in the management of dairy stock and the meeting then adjourned.

Next Tuesday evening Hon. ISAAC DAVIS, of Worcester, will preside. Subject for discussion—*Grasses and Grain Crops.*

Ladies' Department.

TASTE IN FURNITURE.

It is scarcely possible to lay down a rule with respect to the ordinary furniture of a room, yet there is a general law of propriety which ought as much as possible to be observed. Regard must be had to what is called "the fitness of things," and thereby the avoiding of violent contrasts. For instance, sometimes a showy centre-table is seen in the middle of a room, where the carpet and every other article is shabby and out of repair; or a flashy looking-glass stands above the chimney-piece, as though to reflect the incongruous taste of its owner. Shabby things always look the shabbier when thus contrasted with what is bright and new. We do not mean to say that new articles should never be purchased; we remark only, that in buying furniture, regard should be had to the condition of the room in which it is to be placed. For this reason, second-hand furniture is sometimes preferable to new.

"So many men, so many minds," is an old saying; and scarcely two people agree in choosing their assortment of furniture. What is convenient for one is inconvenient for another, and that which is considered ornamental by one family, would be thought ugly by their neighbors. There are, however, certain articles suited to most rooms—an ordinary parlor, for example. The number of chairs depends on the size of the room; eight are usually chosen, two of them being elbows. A square two-flap pembroke table, or a circular one with tripod stand, occupies the centre of the apartment. At one side stands a sofa, a sideboard, a chiffonier, or perhaps a bookcase. Sometimes the chiffonier, with a few shelves fixed to the wall above it, is made to do the duty as a bookcase, and it answers the purpose very well. If there be no sofa, there will be probably an easy chair, in a snug corner, not far from the fire-place; in another corner stands a small work-table, or a light occasional table is placed near the window, to hold a flower-basket, or some other ornamental article. These constitute the articles most needed in a room; there are several smaller things which may be added according to circumstances.

It is one thing to have furniture in a room, and

another to know how to arrange it. To do this to the best advantage, requires the exercise of a little thought and judgment. Some people live with their furniture in the most inconvenient positions, because it never occurred to them to shift it from place to place, until they had really found which was the most suitable. Those who are willing to make the attempt, will often find that a room is improved in appearance and convenience by a little change in the place of the furniture.

It is too much the practice to cover the mantel-piece with a number and variety of knick-knacks and monstrosities by way of ornament; but this is in very bad taste. Three, or at most four articles, are all that should be seen in that conspicuous situation. Vases of white porcelain, called "Parian," or of old china, or a small statue, or a shell or two, are the most suitable. The forms of some of the white vases now sold at a low price, are so elegant, that it is a real pleasure to look at them.

BREAD WITHOUT CRUST.

The following will be interesting to housekeepers, and we would advise its trial—for if hard crusts and burned bread can be avoided, it will be a saving worth accomplishing. The Wyoming Co. Mirror says:

Mr. Throop, of this village, lately presented us a loaf of bread, which was done, and well done, *without a crust*. The process of baking, or rather steaming, he gave as follows: Prepare the dough the same as for baking, in a tin basin; when in a proper condition, instead of putting into the oven, put it into a kettle. There should be something in the bottom of the kettle, a hoop of tin two or three inches broad would be best, to keep the basin from the bottom, and there should be sufficient water to cover about one-third of the basin. Keep the water constantly boiling from the time the loaf is put in, till it is done, which will be about three-quarters of an hour, with an ordinary sized loaf. To know when it is done, press upon the centre of the top of the loaf with the thumb, and if done it will puff back on removing the thumb, if not, the indentation will remain.

The loaf presented us is nearly as white outside as inside, and the outside is scarcely any harder than the rest. The flavor is not perceptibly different from bread well baked. We have tried the experiment in our family, with perfect success. It looks white and beautiful, and we think fully equals ordinary bread in its flavor.

HOW TO MAKE NICE CANDLES.—Candlewick, if steeped in lime and saltpetre, and dried in the sun, will give a clearer light, and be less apt to run.

Good candles may be made thus:—Melt together ten ounces of mutton tallow, a quarter of an ounce of camphor, four ounces of beeswax, and two ounces of alum; then run it into moulds, or dip the candles. These candles furnish a beautiful light.

TO REMOVE BLACK SPOTS FROM PLATE.—Boil the articles in three pints of water, with an ounce of calcined hartshorn; drain, dry by fire, and polish with soft linen rags which have been boiled in the same liquid and afterwards dried, using purified whitening as the plate powder.

Boy's Department.

DANIEL WEBSTER IN BOYHOOD.

In his fifteenth year Daniel Webster was privileged to spend some months with one of the more prominent clergymen of the day, the Rev. Samuel Woods, who lived at Boscawen, and prepared boys for college at one dollar a week, for tuition and board. During his stay with Dr. Woods he was apparently very neglectful of his academic duties, but never failed to perform all his intellectual tasks with great credit. On one occasion the reverend tutor thought proper to give his scholar Daniel a scolding for spending too much of his time up hills and along the streams, hunting and fishing, but still complimented him for his smartness. The task assigned to him for his next recitation was one hundred lines of Virgil; and, as he knew that his master had an engagement on the following morning, an idea occurred to him, and he spent the entire night poring over his books. The recitation hour finally arrived, and the scholar acquitted himself of his hundred lines, and received the tutor's approbation. "But I have a few more lines that I can recite," said the boy Daniel. "Well, let's have them," replied the doctor; and forthwith the boy reeled off another hundred lines. "Very remarkable," said the doctor; "you are indeed a smart boy." "But I have another," said the scholar, "and five hundred of them if you please." The doctor was of course astonished, but, as he bethought him of his engagement, he begged to be excused, and added, "You may have the whole day, Dan, for pigeon shooting."

FIRST STEP TO RUIN.

"My first step to ruin," exclaimed a wretched youth as he lay tossing from side to side on the straw bed in one corner of his prison-house, "My first step to ruin was going fishing on the Sabbath. I knew it was wrong, my mother taught me better; my minister taught me better; my master taught me better; my Bible taught me better. I did not believe them, but I did not think it would come to this. I am undone! I am lost!"

Perhaps he said—it is too pleasant to be cooped up in church. What harm is there in taking a stroll in the woods! What harm in carrying my fishing tackle and sitting on the banks to fish?

What harm? Why the harm is that God is disobeyed, who says, "Remember the Sabbath day to keep it holy." The moment a youth determines to have his own way, choosing his own pleasures before God's will, that moment he lets go his rudder, his compass, his chart; nothing but God's word can guide you safely over the ocean of life. Give that up, you are bewildered, you are drifting, you will be lost.—*Child's Paper*.

RULES AND REASONS.—Horne Tooke, when at Eton, was one day asked by the master the reason why a certain verb governed a particular case. He answered, "I don't know." "That is impossible," said the master; "I know you are not ignorant, but obstinate." Horne, however, persisted, and the master flogged. After the punishment, the master quoted the rule of grammar which bore on the subject, and Horne instantly replied, "I know that very well, but you did not ask me for the *rule*—you demanded the *reason*."

Walnut Grove Nursery.

JAMES HYDE & SON.



We have for sale at our Nursery a larger assortment of trees than ever before offered by us, consisting in part of Apple, Pear, Plum, Cherry and Peach.

Also, Quinces, Currants, Raspberries, Grape-vines, &c. &c.
Ornamental Trees and Shrubs, Buckthorn Plants, &c. &c.
A prime lot of Red Dutch Currants, good size, \$5 per hundred, or \$40 per thousand.

Fine Apple trees, three to five years' growth from bud, seven to nine feet high, \$25 per hundred, or \$200 per thousand.

We devote ourselves solely to the raising of trees; they receive our strict personal attention; we are therefore able to warrant every article true to name.

Those who intend purchasing large quantities of Apple trees are respectfully invited to call before purchasing, and examine our stock, as it is large, and doubtless unsurpassed by any in the vicinity.

A liberal discount on all articles by the hundred.

Orders for Scions, (if sent early,) faithfully attended to.

Trees delivered in Boston free of expense, packed if desired. Catalogues sent to post-paid applicants.

☐ All orders thankfully received, and promptly executed.

JAMES HYDE & SON.

Newton Centre, Feb. 21, 1852.

3m*

For Sale,



Four pleasantly situated dwellings in ELIOT STREET, JAMAICA PLAIN.

Also, two farms on WELD STREET, WEST ROXBURY—the one containing about forty acres, with house and barn; the other containing about twenty-three acres, with house and two barns.

But a small portion of cash is wanted for any of this property. Apply to J. C. GORE, Jamaica Plain.

Feb. 21, 1852.

2m—2

American Veterinary Journal,

DEVOTED to the Diffusion of Veterinary Knowledge, and its collateral sciences. Published monthly, octavo form, containing thirty-two pages, making at the end of the year a handsome volume of three hundred and eighty-four pages, to which an index will be furnished.

Price \$1.00 per year in advance. Six copies for \$5.00.

Edited by GEORGE H. DADD, Veterinary Practitioner, to whom all communications, post-paid, must be directed.
Boston, Feb. 14.

2w—2½

Farm at Auction.



Will be sold at Public Auction, on the premises, on WEDNESDAY, the 3d day of MARCH, at one o'clock, P. M., the large and valuable farm belonging to the late AMOS GOULD, of IPSWICH. Said farm is situated on the road leading from Ipswich to Topsfield, about 2½ miles west of the depot, 4 miles from Wenham Depot, and 10 miles from Salem, and bounded south by Ipswich river; containing upwards of three hundred acres of good land, well fenced with heavy stone walls, with one of the best orchards in the town, covering about 12 acres of land, and is mostly grafted with choice fruit, and in bearing state; also, 7 acres of woodland covered with Oak and Walnut wood and timber. The buildings on the farm are good; the dwelling-house is a double one, two stories high and completely finished. There are three barns, three sheds, corn-house, cider-mill, wood-shed and piggery, with other out-buildings in good repair.

Said farm is capable of keeping 30 to 35 head of cattle in winter, and 40 to 45 head in summer, and is well calculated for a milk farm for Boston market.

Also, a lot of salt marsh lying in Ipswich, on the Hundreds so called, and a lot of peat meadow in the same town. Also, two lots of woodland, about 5 acres each, and one lot of meadow in Topsfield on a Verrill's Island, so called, together with all the stock, tools, and produce on the farm.

The above described premises will be sold at the time and place above mentioned, if not previously disposed of at private sale.

☐ If the day designated should be very stormy, the sale will take place the first fair day.

☐ Inquire of AMOS GOULD, Wenham, Mass., or B. F. PATCH, on the premises.

Feb. 7, 1852.

4w—1

Cast Steel Axes.

SUPERIOR Cast Steel AXES, of "Hunt's," "White & Olmstead's" and "Hannum's" manufacture, all warranted. For sale, wholesale and retail, by RUGGLES, NOURSE, MASON & CO., Quincy Hall, (over the Market,) Boston.
Jan. 10.

3m*

Fishkill Landing Nursery,

2½ MILES NORTH FROM THE NEWBURGH FERRY.

FRUIT AND ORNAMENTAL TREES.



The subscriber respectfully solicits the attention of FRUIT GROWERS, and dealers in Fruit Trees, to his large stock offered for sale the present spring, consisting of

48,000 APPLE TREES, of the most approved varieties, 6 to 10 feet high, at from \$12 to \$14 per hundred.

30,000 PEAR TREES, embracing over one hundred of the best varieties, 5 to 8 feet, 30 cents each, \$25 per hundred.

30,000 CHERRY TREES, two or three years from the inoculation, 6 to 12 feet, at \$20 to \$25 per hundred.

5000 APRICOT, OF THE BEST VARIETIES, one to three years from the bud, \$8 to \$12 on Peach, and \$25 to \$30 on Plum stocks, per hundred.

20,000 PEACH TREES, of the most valuable standard varieties, entirely free from disease, 7 cents each, \$6 per hundred.

5000 ISABELLA AND CATAWBA GRAPE-VINES, two to four years old, with fine roots, having been annually cut back; they are in excellent condition for vineyard planting—20 cents each, \$10 to \$15 per hundred.

8000 QUINCE TREES, mostly of the apple variety. Currant and Raspberry bushes, Strawberry plants, Summer Hybrid perpetual and other Roses, &c. &c.

40,000 DECIDUOUS AND EVERGREEN Ornamental Trees, many of which are of large size and fine form. 10,000 Arbor Vita, 1½ to 5 feet high, \$12 to \$15 per hundred.

8000 BALSAM FIR, 1½ to 5 feet, \$12 to \$30 per hundred.

The subscriber, in consequence of the advantages he possesses, is enabled to sell at low prices; having 300 acres of land, with a variety of soil, the different kinds of plants are cultivated in that best suited to their growth. His facilities for forwarding packages are all that he can desire. The Nursery is within 2½ miles of the Hudson River Railroad Depot, at Fishkill Landing. Steamboats run daily to New York and Albany from Newburgh, on the opposite side of the river.

From 50 to 60 acres attached to the Nursery are closely set with Standard and Specimen trees, which greatly increase his facilities for the attainment of correctness. The new and most valuable varieties of the Apple, Peach, Pear, Plum, Apricot, Cherry, &c., which have recently originated in this country and Europe, have been procured as early as practicable, and tested, or are in the course of being tested, in the proprietor's own grounds. The new and rare Deciduous and Evergreen Ornamental Trees are annually imported, of which fine plants can be furnished.

Those who are planting Orchards, starting Nurseries; or engaged in the sale of trees, &c., are invited to examine his stock. Trees, Shrubs, &c., when ordered, will be taken up carefully, correctly labelled, packed in the best manner, forwarded agreeable to order, and with the least possible delay.

☐ Catalogues sent to all who apply by post-paid letters.

DANIEL BRINCKERHOFF.

Fishkill Landing, Feb. 28, 1852.

2w—1

Farmer Wanted.

WANTED, a man with his wife, to take charge of a Farm, about twelve miles from Boston; one who can give undoubted reference as to character and capability. To a person who gives satisfaction, it will be a permanent situation.

Apply to

C. & M. COX,

Feb. 21, 1852.

1stf

26 and 28 Central St., Boston.

The Working Farmer.

A MONTHLY Periodical devoted to Agriculture, Horticulture, Floriculture, Kitchen Gardening, Management of Hot Houses, Green Houses, &c., embracing Agricultural Chemistry, Preparation of Manures, &c.

Edited by PROFESSOR JAMES J. MAPES, and published by FRED'K MCCREADY, American Institute, 351 Broadway, New York.

TERMS PER YEAR IN ADVANCE,

Single Copies.....\$1.00

Six Copies.....5.00

Twenty-five Copies.....20.00

Back Volumes in covers at subscription prices. The Fourth Volume will commence March 1, 1852.

Jan. 1, 1852.

2½

Cattle Ties.

OX AND COW TIES, of all sizes, a large assortment; also, Draft and Trace Chains; just received and for sale low by RUGGLES, NOURSE, MASON & CO., (over the Market,) Boston.
Jan. 10.

3m*

Garden Seeds.

WE respectfully solicit the attention of purchasers of GARDEN SEEDS to our extensive stock, which we offer for sale. We have all the sorts of Vegetable Seeds that have proved worthy of cultivation; also, Grains, Grass and Flower Seeds. All the varieties are raised and selected expressly for our trade, and we do with confidence recommend them to all who desire to procure seeds that will prove true to their names.

RUGGLES, NOURSE, MASON & CO.,
Jan. 1. Over Quincy Market, Boston.

CHERRY PECTORAL

For the Cure of,
**COUGHS, COLDS, HOARSENESS,
BRONCHITIS, WHOOPING-COUGH,
CROUP, ASTHMA, AND
CONSUMPTION.**

THIS invaluable remedy for all diseases of the Throat and Lungs has attained a celebrity, from its remarkable cures, never equalled by any other medicine before. Other preparations have shown themselves palliatives, and sometimes effected notable cures, but none has ever so fully won the confidence of every community where it is known. After years of trial in every climate, the results have indisputably shown it to possess a mastery over this dangerous class of diseases which could not fail to attract the attention of physicians, patients and the public generally.

See the statements, not of obscure individuals, and from far distant places, but of men who are known and respected throughout the country.

The widely-celebrated surgeon, Dr. VALENTINE MOTT, of New York City, says:—"It gives me pleasure to certify the value and efficacy of 'Ayer's Cherry Pectoral,' which I consider peculiarly adapted to cure diseases of the throat and lungs."

Dr. PERKINS, the venerable President of the Vermont Medical College, one of the eminently learned physicians of this country, writes, the Cherry Pectoral is extensively used in this section, where it has shown unmistakable evidence of its happy effects upon pulmonary diseases.

Rev. JNO. D. COCHRANE, a distinguished clergyman of the English Church, writes to the proprietor from Montreal that "he has been cured of a severe asthmatic affection, by Cherry Pectoral." His letter, at full length, may be found in our Circular, to be had of the Agent, and is worth the attention of asthmatic patients.

This letter is from the well-known Druggist at Hillsdale, Michigan, one of the largest dealers in the State; and this case is from his own observation:

HILLSDALE, MICH., Dec. 10, 1849.

Dear Sir.—Immediately on receipt of your Cherry Pectoral I carried a bottle to an acquaintance of mine who was thought to be near his end with quick consumption. He was then unable to rise from his bed, and was extremely feeble. His friends believed he must soon die, unless relief could be obtained for him, and I induced them to give him your excellent medicine a trial. I immediately left town for three weeks, and you may judge of my surprise on my return, to meet him in the street on my way home from the care, and find he had entirely recovered. Four weeks from the day he commenced taking your medicine, he was at work at his arduous trade of a blacksmith.

There are other cases within my knowledge, where the Cherry Pectoral has been singularly successful, but none so marked as this. Very truly yours,

G. W. UNDERWOOD.

PREPARED AND SOLD BY JAMES C. AYER,

Practical Chemist, Lowell, Mass.

Feb. 14, 1852.

3m

Zinc Milk Pans.

A NEW ARTICLE, without seams or solder, and will not rust. At wholesale and retail, (over the Market,) Boston.

Jan. 10.

3m

RUGGLES, NOURSE, MASON & CO.

Mexican Guano.

A NEW ARTICLE is now offered to the Agriculturist and Dealers, under the above name, from its having been found near the Mexican coast. It has been analyzed by C. T. Jackson, M. D., State Assayer, Boston, Dr. David Stewart, of Baltimore, and others. Dr. Stewart says it contains the largest proportion of Phosphates he has ever met with in Guano.

The following are the result of the analysis made by C. T. Jackson, M. D.:

Water.....	82.40
Vegetable Matter.....	15.30
Soluble Salts (in Water) Phos. Soda.....	6.12
Phosphates of Lime and Magnesia.....	60.50
Insoluble Matter (Silica).....	6.10

99.38

The quality of this Guano as a rich fertilizer, and the great reduction in price compared with the Peruvian, is such as to render it an object for the agriculturist and dealers to buy and give it a trial. It may be obtained of A. D. WELD, 157 State Street, or P. A. STONE, who may be found at 15 Crescent Place, Boston, where also other information may be obtained respecting it.

Feb. 21.

Circular.

THE subscriber takes this opportunity to return his thanks to the citizens of WALTHAM and vicinity for their liberal patronage for several years past, and solicits a continuance of the same. Orders for JOB PRINTING, of every description, promptly attended to, on usual, and returned immediately.

Address JOSIAH HASTINGS, Waltham.

N. B.—He would also give notice, that for the better accommodation of many of his customers, and the public generally in adjoining towns and at a distance, who now go to Boston by way of railroads, that he has made an arrangement with Mr. J. C. FRENCH, (formerly a workman in his office in Waltham,) at No. 11 CORNHILL, BOSTON, where orders for Book, Plain and Fancy Card and Job Printing, will be neatly and promptly executed on new Machine Presses, at the lowest prices, and returned immediately, by Express or otherwise, as may best suit the convenience of customers.

Address J. C. FRENCH & CO.,
Feb. 7. No. 11 Cornhill, Boston.

State Mutual Life Assurance Co. OF WORCESTER.

GUARANTEE CAPITAL, \$100,000.

Hon. JOHN DAVIS, President.

Hon. ISAAC DAVIS, Vice.

Hon. STEPHEN SALISBURY, Presidents.

THIS Company was chartered in March, 1844, and commenced business on the first of June, 1845. Its business is conducted on the most economical principles.

The well considered and Invariable policy of this Company has been to prefer the safety and mutuality of the assured to the showy advantages of a large number of policies, and an imposing amount of receipts. California risks have been uniformly declined, and the multiplication of policies in cities considered especially liable to cholera has not been encouraged.

The cash premiums of this company are calculated on the most approved tables of the probability of life, and at the lowest rates which are deemed safe.

Pamphlets, explaining the principles and advantages of life assurance, with forms of application and rates of premiums, may be had by application at the Office of the Company in Worcester, or of the Agents in all the principal towns in New England.

Dec. 27, 1851.

CLARENDON HARRIS, Secretary.

1m

Pure Devon Stock.

COWS, HEIFERS, BULLS and BULL-CALVES for sale. Apply at Office of N. E. Farmer, or to the subscriber.

Dec. 27, 1851.

B. V. FRENCH,
Bainbridge, Mass.

Fruit Trees.



The proprietors offer for sale a large and fine stock of Fruit, and Ornamental Trees, Shrubs, Buckthorn Plants &c.

Pear, Apple, Peach, Cherry and Plum Trees of choice standard varieties. Also Quinces, Gooseberries, Currants, Raspberries, Strawberries, Grape Vines, &c.

Extra sized Hamburgs for the Conservatory or Grapery. A fine lot of Cherry and Apple Trees, two to four years from bed. The whole for sale at reduced prices.

D. & G. F. STONE,
Hammond Street, East Newton.

W141--417

Jan. 10, 1852.

RAYNOLDS & NOURSE, PROPRIETORS.
OFFICE....QUINCY HALL.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.**FARM WORK FOR APRIL.**

Fitful April has come again, with sunshine and tears, with singing birds, soft breezes and flowing streams. Right welcome, April! Fitful and uncertain as thou art.

"To see thee smile, all hearts rejoice;
And, warm with feeling strong,
With thee all Nature finds a voice,
And hums a waking song.
The lover views thy waking hours,
And thinks of summer come,
And takes the maid thy early flowers,
To tempt her steps from home."

We believe there is no heart so dead to the influences of nature but is wakened into new life by the return of spring. To us it is like waking into a new existence, a new world of light, and life, and beauty. Nature has a new voice, as well as life. The birds pour forth their songs—the herds low and sheep bleat, and bring forth new generations of animal existence to the enjoyments of a new life. The soft south winds and gentle showers touch the branches of the trees and swell the buds for future fruit, while the brooks, glad to be unchained from winter's frost, babble their praise as they go rejoicing on their way to the rivers and the sea. "Fresh leaves and flowers deck the dead season's bier;" there is one of them—the primrose! This early child of spring, "that comes before the swallow dares, and takes the wind of March with beauty," is a peculiar favorite. O, come with us for a day into the country—and thou wilt be the better for it all the year after.

But we cannot pause to be sentimental; the spring has come, and with willing hands and stout hearts we must be "up and doing."

A careful review of the whole farm becomes necessary this month. The trees, shrubs and plants of every kind should be examined to see what effect the winter has had upon them. Young nursery trees may have been thrown out by the frost; if so, they should be carefully reset as soon as the earth is sufficiently dry. Clean up the currant and gooseberry bushes and cut out the old wood. Do the same to the raspberries, and if it

was not done last fall, trim, and tie them up to a stake in hills, or to horizontal bars.

DRAINS.—Look to the drains, and set them flowing if the spring floods have choked them; or if they have gullied the mowing, planting or pasture lands, improve the earliest moment to level them up and scatter a little grass seed where it is needed.

FENCES.—Leave no rod of these unnoticed; mend up the wall gaps thrown down by frost; and add a new rail and post at weak points. If your cattle once go through, it will require double the strength to resist them afterwards. They understand a weak spot in a fence, and a man too, sometimes, quite well. Lay up that bit of stone wall which you have been intending to do for some years. Thistles and foul weeds are taking possession of the ground among the loose stones, and will scatter their seeds over your fields.

GRASS LANDS.—Cattle should not be allowed to run upon the mowing fields in the spring. They poach it badly, making it inconvenient to mow and rake, and they get a taste of green grass, which makes them dainty of dry food afterwards, and probably will mutilate more young trees than you will have patience to look at after the mischief is done.

THE HOT-BED.—This may be one of the most simple contrivances; it may be made without hammer or nail, if you desire it, by driving small stakes by the sides of four boards to keep them on their edges, and sloping the whole to the south. This may be filled with fine loam and rotten manure, and your delicate seeds will come up just as well as in a gilded frame. But a substantial hot-bed would be cheaper in the end. Start lettuce, tomatoes, radishes, peppergrass, or any thing else that you may fancy, early, and by a little attention you will get a supply of excellent and wholesome vegetables, far better for the system in the spring than a principal beef and veal diet.

PLOWING.—By the time the review of the farm has been gone through with, the fences repaired

and garden cleaned up, the wind will have swept away the redundant vapors, and the earth become drained of its surplus waters, and ready for the plow. But this important operation should not be done when the soil is so moist as to leave the furrow in a wet, heavy clod. If stubble ground, it should be so dry as to fall to pieces upon leaving the mould board, or if inverted sod, dry enough to come into a fine tilth upon being harrowed. Make experiments; where you have plowed but six inches, try nine, on a portion of your land, or, where you have plowed nine, go down twelve inches this year, if you can.

GRAIN.—Get in barley, oats, &c., as soon as the soil will permit, and where laying down to grass, be generous with the seed. Our practice has been to sow one bushel of red top, one peck of hard's grass and six pounds of clover seed to the acre, but are satisfied that the herd's grass should be increased to twelve quarts. Unless it is exceedingly inconvenient, roll the land well after the seed has been harrowed in. Level balks, fill up holes, and give the field a neat and finished appearance; the facility and comfort in mowing, raking, and getting the hay will more than repay the cost. On this subject the reader is referred to an excellent article in the *Farmer* for last year, page 148, by our associate Mr. HOLBROOK.

TREES.—As soon as the soil is dry enough to fall into fine particles upon being stirred, young trees and shrubs may be transplanted. Be careful not to delay this work too long. Dig holes six feet wide by eighteen inches deep; return the top soil to the bottom of the hole; mingle a little well-rotted compost with this, and set the tree level with the surrounding soil. Take up the trees from the nursery with great care; do not pull them up; this breaks the fine spongioles upon which the tree will be dependent for its existence; if any roots get bruised or broken, trim them with a sharp knife; spread the roots, and sift the fine soil among them.

GRAFTING.—Your scions were probably cut in February or March, and have been kept moist and fresh. As soon as the weather will allow you to work the wax, begin to set them, so that you may accomplish all work in its appropriate season.

APRIL!—Now is the time for action. While your physical powers have become stronger by a season of comparative repose, your minds are enriched by many a useful lesson from the experiences of others, and stored with hints from the books, which you can observe and decide upon as you pursue the spring and summer culture of your fields. All is in order out of doors, while love, affection and gratitude are the duties which cluster about the family board. Let one impulse, one aim impel you all, and charity and good-will grow in your hearts as you tend your growing crops.

For the New England Farmer.

PROFITS OF FOWLS.

Mr. BROWN:—Being a constant reader of your most valuable paper, I take quite an interest in the many useful communications therein on the experiments in poultry. I have read the communication of your Stonington correspondent, W. C., and with your permission, will state the result of an experiment on a small scale, and wish it understood that my fowls are kept for the profit on their eggs only. On the 31st of December, the account stood thus:—

	Dr.
25 fowls, at 25 cents each.....	\$6.25
Interest on the same.....	.37½
20 bushels of corn and meal.....	15.43
	\$22.05½
	Cr.
2352 eggs, or 196 dozen.....	26.07
13 fowls used, at 25 cents each.....	3.25
2 do. at 50 do.	1.00
Manure.....	1.50
21 fowls on hand, at 25 cents each.....	5.25
	\$37.07
Deduct old stock and expense.....	22.05
Profit.....	\$15.02

Assuming the mean number of fowls to be 23, the cost of keeping is about 67 cents each, and the profits on each fowl 65 cents. It will be seen that my fowls are profitable as layers, and that is what we most want in this vicinity; it also proves that fowls can be kept upon grain, with profit, and at a much less expense than the estimates of your correspondent, W. C., who says a large portion of his fowls are Shanghaes, and that it costs but little more to keep this kind of fowls than the natives. He also says, "my experiments prove the Shanghaes the easier fowl to keep." I must differ from W. C., on that score. First, he has stated that the cost of keeping his fowls, after his method, is 89 cents per head, while it has cost to keep mine on grain only 67 cents, which is 22 cents in my favor. Notwithstanding the accounts of the annual average, that he has alluded to being about \$1.10 per head, it may appear, at the first glance, that W. C. has made great profits; but by comparing our accounts, I think there will be a different conclusion. In the first place, W. C. values his fowls at 67 cents each, while mine are only 25 cents; and those he sold and used, at 43½ cents, while mine are at 25 cents, except two at 50 cents each; and his stock on hand at \$1.31, more than five times the value I set upon mine, which is 25 cts. There is also quite a difference in the price of eggs sold; W. C.'s brought over 18 cents per dozen, while mine brought a little over 13 cents. Now why is there so much difference?

I have not stated what kind of fowls mine are, neither my method of treatment, for the reason that I don't wish to take up the room of your excellent paper. But if this should be expected, I may, after my manner, communicate more.

Duxbury, Mass., Jan. 24, 1852.

L. H.

☞ We would call the particular attention of the reader to the Legislative report at the State House on the 16th inst. The report of Col. WILDER will be found of great service to those who are selecting fruits. Mr. FRENCH has had a long experience in cultivating fruits, and we are happy to give the list which he reported.

For the New England Farmer.

CANKER WORMS.

BY T. W. HARRIS.

Canker-worm moths have already made their appearance. My trees were tarred on the 10th of March, and many of the moths came out of the ground and were caught in the tar during the night of the 13th instant. Others may be expected to appear till the end of the month, and will endeavor to ascend the trees in order to deposit their eggs. A few of the parent insects may lay their eggs on the trunks of the trees; but the greater number proceed to the extremity of the branches, and deposit them in small clusters, upon the twigs and buds. The trees most subject to the attacks of canker-worms are the apple, cherry, plum, mountain-ash, linden, and elm. When trees have been exposed to the unchecked depredations of these insects during several successive years, they become impaired in vigor, and decay prematurely. In order to protect them, they should be tarred seasonably and repeatedly in October and November, and again in March; or some other approved and effectual remedy should be employed, to prevent the parent insects from ascending the trunks and laying their eggs. A large proportion of the insects that rise in the autumn are wingless females; and, on the contrary, more males than females ascend in March. It seems difficult to account for this disparity of the sexes at these two seasons, unless some of the females survive the winter upon the trees, to pair with the males in the spring. I am not aware, however, that any observations have been made confirming this suggestion. The eggs are hatched about the first of May. The young canker-worms, then less than a twentieth of an inch in length, immediately conceal themselves in the opening buds, and begin to eat the leaves before fairly expanded. They are very injurious to grafts, and sometimes entirely destroy the buds before their presence is discovered or suspected. A thorough syringing of these, and of small trees and shrubs, with a solution of whale-oil soap, has appeared to be a good remedy. This application may be made in May and early in June. When trees, infested with canker-worms, are suddenly jarred or shaken, the worms drop off, and hang suspended by threads, but soon climb up again by means of these threads. If, however, the connection of the dangling worms with the trees be broken off by striking the threads with a pole, the insects will have no means of mounting the trees again but by creeping up the trunks, and this they may be prevented from doing by a belt of tar about the trees, or by leaden troughs filled with oil.

Many kinds of destructive insects are found to prevail and to disappear at irregular intervals. Beginning with a few, they continue to increase in numbers during several successive summers, till at length, after a season marked by an extraordinary abundance of them, they retire from the scene of their depredations, not to return in the same force, for several years. During such intervals, when none or few are seen, vegetation, if not too much exhausted, has time to recover before the reappearance of new and successively increasing swarms of the spoilers. Among the insects, whose irregular visitations and disappearance have been observed, are rose-bugs, cherry-slugs, grasshoppers, apple tree caterpillars, salt-marsh caterpillars,

and canker-worms. The cause of the disappearance of these insects seems not to be well understood. Various reasons have been assigned therefor, such as wet weather, cold winters, pestilence, and the diminution of their accustomed food. The true cause seems to have been overlooked, namely, the rapid increase of the natural enemies of these insects, which, in the course of a few years, become so numerous as to overpower them completely, and put a sudden stop to their depredations.

Canker-worms have many enemies. They are devoured by moles, and by various kinds of birds, such as the king-bird, oriole, black-poll warbler, black-throated bunting, chickadee, and especially the cherry-bird, which lives almost entirely upon them till cherries begin to be ripe. They are eaten by a very large and splendid green beetle (*Callosoma scrutator*.) that appears about the time when these insects begin to leave the trees. These beetles do not fly, but they run about in the grass after the canker-worms, and even crawl up the trunks of the trees to catch them as they come down. During the prevalence of canker-worms, in the years 1839, 1840, and 1841, great numbers of these beetles were observed in Cambridge, where they have been seldom seen at other times, and many were thoughtlessly crushed under foot in paths and the highways. The potter-wasp (*Eumenes fraterna*.) an insect rather smaller than the common brown wasp, fills her clay cells with full-grown canker-worms, often gathering eighteen or twenty of them to supply her future brood with food. A four-winged ichneumon-fly, also stings them, and lays in each one a single egg, from which is hatched a little maggot that consumes the fat of the canker-worm, and causes it to miserably perish. I have seen one of these ichneumons sting several canker-worms, in succession, and swarms of them may be observed around the trees as long as the canker-worms remain. Among a large number of canker-worms, taken promiscuously from various trees, nearly one-third were unable to finish their transformations, in consequence of being preyed upon by the maggots of a two-winged fly, or *Tachina*. Even the eggs of the canker-worm moth have their parasites, which destroy great numbers or prevent their hatching. This kind of parasite is a tiny four-winged fly, a species of *Platygaster*, which goes from egg to egg, and puncturing them, drops one of her own still smaller eggs in each. Sometimes every egg in a cluster will be found to have been thus punctured and seeded for a future harvest of the *Platygaster*. The young parasite, hatched within the canker-worm egg, the shell of which, though only one-thirtieth of an inch long, serves for its habitation, and the contents for its food, is an exceedingly minute maggot, which becomes a chrysalis within the same shell, and finally is transformed to a *Platygaster* fly like its parent. All these enemies will be found to abound when canker-worms have prevailed during several years; and to them chiefly, if not alone, I cannot but attribute the sudden check that was given to the further increase of these destructive insects in the summer of 1841, when their ravages seemed to have reached their height in this vicinity. From that time till the year 1847, scarcely a canker-worm was to be seen here. But the race was not extinct; and enough continued and multiplied, year after year, to seed

the ground, on their descent into it, for annually increasing harvests. They are now evidently gathering in greater numbers; and, unless a timely check be put to their further increase by natural or artificial means, they will continue to multiply and spread desolation in the same places that their former generations have laid waste.

T. W. HARRIS.

Cambridge, March 15, 1852.

LOOK OUT FOR YOUR HORSES.

One of the exceedingly troublesome diseases to which horses are liable is the "Grease," or better known among us as "Scratches." It is an inflamed state of the space between the fetlock and the coronet of the hoof. In a healthy state no velvet can be more soft to the hand than this, and with this softness it has an oily touch, which one would scarcely look for in a part so much exposed to dust and dirt. The disease sometimes attacks all the feet, but the heels of the hind feet more frequently. After inflammation has existed a short time the skin becomes dry and cracks, and soon the part is raw and very tender.

The cause of the disease is undoubtedly the want of proper attention. The horse is driven through the cold mud, and perhaps is left standing in it for two or three hours during the day, and then returned to the stable with a portion of it adhering to his heels. This absorbs the peculiar oil that is upon the surface and perhaps checks its secretion, until dryness and cracking of the skin takes place. The best way, then, is to *prevent the disease by proper care*. Whenever the animal is returned to the stable during muddy travelling, the legs should be thoroughly cleaned, and briskly rubbed for a minute or two, and the pastern washed and wiped dry. But if the disease is there, washing, and the application of soft oil or grease, will soon effect a cure. Horses that are passing through the barn yard frequently, will be likely to contract the disease. If the scratches extend up the legs, or are very bad on the heels, wash with castile soap and warm water.

Foul in the foot of neat cattle is occasioned by exposure to the strong substances through which they pass in the barn-yard, or standing in them and in the cold mud while loading manure. A careful farmer will wash their feet on returning them to the leanto for the night. Scratches are sometimes caused by allowing the horse to stand where the urine, manure and other dirt, is allowed to gather under his feet.

VENISON.—Moose and Deer meat have been abundant in this market through the winter. An old patriarch Moose of the forest laid ignobly in the dust before our door the other day, with widely-branching antlers and prodigious lips. We thought he would weigh ten hundred pounds. Yesterday, a large wagon load of fine deer was in South

Market Street. We hope the hunters will not exterminate the race in the forests of Maine. It is a lubberly business to shoot or knock down a deer wallowing neck deep in the snow; but to lie in wait on the sunny slopes of Virginia, and after some hours, perhaps, of intense expectation, see the noble buck springing down the vale, send the fatal bullet through his heart, witness the bound into the air and the last plunge to the earth, is another sort of hunting altogether.

For the New England Farmer.

PLOWING.

BY R. B. HUBBARD.

How oft should the earth be disturbed by the plow! This is a question of much practical importance to the farmer. Plowing is an expensive operation, and unless beneficial, should be avoided as far as possible.

Hesiod, a contemporary of Homer, states that the Greek farmers plowed their ground three times for each crop. First in autumn, then in early spring, then just before planting.

With the Romans it seems to have been a common if not invariable practice, to plow twice for each crop.

In modern times, the fallowing of ground for winter grain is a common practice, both in Europe and America. Now what is the object of this fallowing, as it is termed? If it be simply to pulverize the soil and render it pliable, that might better be accomplished by plowing once and harrowing. This is not the object,—certainly not the sole, nor the principal object. 'Tis to convert whatever vegetable matter may have grown from the soil into nutriment for the new crop. Farmers often speak of letting land *rest*, as though, like an animal, it would regain strength by repose.

This I deem to be incorrect. Take a quantity of earth and place it under an exhausted receiver, and there suffer it to remain a century. It will contain no more strength, no more fertilizing properties, than before. But allow it to be exposed to the atmosphere for one day, and it will gain strength.

That the air is the principal source of fertility can easily be shown. Allow a piece of ground, which has become so exhausted that it will not pay for cultivation, to remain at rest, for some thirty years, and what do you find upon it? From thirty to fifty cords of vegetable matter, besides the stumps and roots with which the earth is filled. And this is not all. Upon removing the wood it will be found that the soil has become rich with fertilizing matter, and that for a number of years it will produce large crops of grain and grass without manure. Whence comes this fertility? From what source has this exhausted soil derived the materials for such crops?

Let us subject the product to the test of fire. The wood is consumed and there remains but the ashes. As I have before remarked, less than *one-tenth* of the material of which the wood was composed remains. The other *nine-tenths* have assumed a gaseous form, and have mingled with the atmosphere, to be wafted to other fields and to enter into the composition of other vegetable matter. The ashes which remain are earthy matters, in

the form of soluble salts, alkalies, and alkaline earths, &c. The earthy matter may have been taken from the soil, but the vegetable or organic matter cannot have been derived from that source, for the very plain reason, that the soil now contains far more vegetable matter than thirty years before. Hence, the conclusion, to which I have before arrived, seems irresistible, that vegetables derive most of their sustenance from the air. Hence, to increase the fertility of the soil, we must frequently expose it to the atmosphere, and that in such a manner as to allow the air to permeate as low as the roots of plants are expected to penetrate.

The object of fallowing then is two-fold. First, to turn under and expose to decay whatever is grown upon the surface; and this should be done at the time when the amount of vegetable matter is greatest; and second, to expose to atmospheric action that portion of the soil from which it has for a time been excluded.

In answer to the question, how often should land be plowed, I should say, much more frequently than our farmers are in the habit of plowing. The practice of mowing land from five to seven years, as many farmers do, is a ruinous one. It is in perfect keeping with the policy of the teamster, who drives his team on short feed, till they are reduced to skeletons and utterly incapacitated to draw any thing but an empty wagon, and then commences nursing and giving them extra feed that he may restore them to their wonted strength and vigor. Far better to keep the team in good condition in working order. And so of the land. Let it be mown, at most, two years, and in the fall of the second, or spring of the third, turn under as much grass as can be covered, and there will be no need of twenty cords of manure to the acre to secure a crop of corn and keep the land in heart.

If my position is tenable, namely, that plants derive a large portion of their nutriment from the atmosphere, worn-out lands may be reclaimed by plowing. I think it will be found generally, that in lands exhausted by continuous *stinting*, there is a lack of organic, rather than inorganic matter. Or perhaps more correctly, that the deficiency in the former is greater, in proportion as it enters more largely into the composition of plants, than the latter.

Take, for example, an old field, which has been exhausted by continuous cropping with rye. It will be found by analysis, that there is a deficiency of potash, lime and phosphorus, also an almost entire destitution of vegetable matter. The earthy or inorganic substances must be supplied by the cultivator. To the vegetable matter the soil will help itself, only give it a chance. Plow thoroughly about the first of June, seed lightly with buckwheat, and harrow in some five bushels of ashes to the acre. Plow again when the buckwheat is in bloom, and sow a little clover seed, say four lbs. to the acre, rolled in gypsum. Let it remain one year, and repeat the last process, increasing the quantity of clover and using phosphate of lime instead of the sulphate. In this manner, lands which are all but worthless, may, with comparatively little expense, be rendered productive.

This is not mere theorizing; I give the result of observation. One of the most practical farmers in the State has tested the efficacy of this process on various soils and with most satisfactory results.

Thousands of acres, in this commonwealth, not now yielding enough to pay for fencing, might, by this simple process and trifling outlay, in the course of five years, be restored to their original fertility.

A CONVENIENT HOT-BED.

Early vegetables are not only palatable, but healthy. They come at a time when the system does not require so much stimulant as animal food imparts, and compose that which is suitable for the season. A person having the merest patch of land may have a hot-bed and start some of the choice vegetables for early use, such as peppergrass, lettuces, tomatoes, early cabbage, celery, &c.

We have had the above cut engraved to give the idea of a cheap and convenient hot-bed; one that will require but little room if you have but small space, or that may be enlarged or multiplied at will. They should be made low, as the wind is much less likely to blow off the sashes. The reader is referred to our last year's volume, page 123, for a plan of a hot-bed still more cheap and simple, and which is accompanied with directions for preparing the soil and planting seeds.

For the New England Farmer.

LATE KEEPING APPLES.

BY O. V. HILLS.

GENTLEMEN:—There are but few first-rate varieties of apples under cultivation which will continue sound and retain their flavor till late in spring, or even to midsummer, like the Roxbury Russet and some others. It is very desirable that new kinds of this class of fruit should be obtained, as good late apples will command an extra price, the supply at present not being equal to the demand. The Northern Spy is an excellent late variety, and should it prove to be adapted to this region, will be a valuable acquisition to the list. It originated in the State of New York, and it is well known that kinds which are first-rate there, are, some of them, at least, not worth cultivating here in New England. It would, therefore, be well to wait till this kind is proved as to bearing, adaptation to climate, soil and other respects, before entering largely into its cultivation. I saw the Northern Spy in fine condition the last of May, the past season; they were taken from a barrel for which a man had just paid six dollars, had not lost their flavor, and were perfectly sound.

There is no doubt but there are many long keeping varieties of great merit among our native apples, which have never been brought into public notice. It is desirable that they should be sought out and proved, and such as are found worthy of propagation, widely disseminated; it perhaps might be advisable for our horticultural societies to offer a premium for the best late keeping apple; this would call out many kinds from which to make a selection, altogether new, as the offer should embrace native or seedlings only.

Good late sweet apples have been much inquired for, for several years past. In this region there are not enough grown for home consumption. We have many varieties of fine Winter Sweetings, and it is singular that there are not more of them cultivated. The Danvers Winter Sweet, Seaver's Sweet, Tolman's Sweet, and many others which might be mentioned, will always sell quick and at good price in market.

Apples are peculiarly refreshing in the early part of summer, when the warm season commences, and other fruit is not to be had. After the cherries and other fruits begin to ripen we can dispense with them better; but the extra price which good late apples will always demand, if nothing else, should induce fruit growers to search out and cultivate the best of them.

O. V. H.

Leominster, March, 1852.

For the New England Farmer.

WHEAT--CORN--HENS.

FRIEND BROWN:—We have received and read the *N. E. Farmer* from its commencement, and have been satisfied that the dollar paid annually for it has been returned to us in a four-fold proportion, and not wishing longer to remain "as barren sands which imbibe the shower and render neither fruit nor flower," will give to the public, through the columns of the *Farmer*, our success in raising winter wheat, Indian corn, and a few remarks on hens.

In the 8th mo., 1850, we spread 4 cords of good stable manure on 3-4 of an acre of what is called in this vicinity good corn land, (which in the previous month yielded not more than one ton of hay per acre,) plowed it in, rolled and harrowed with a light harrow, sowed 3 pecks white flint wheat, worked it in with a harrow and seeded with timothy and red-top. In the 7th mo., 1851, harvested the wheat, which appeared fine, threshed it the following month, and obtained 21 1-2 bushels of as good heavy grain as we could wish to see. The ground appeared to be well seeded, and we shall be disappointed if we do not obtain 2 tons of hay per acre the next season.

A writer in the *Farmer* says that Indian corn is not a good crop to raise after potatoes. We do not know what he calls a good crop, but we feel pretty well satisfied with 60 bushels to the acre, which we have raised for the past three years on land which bore a crop of potatoes the previous year by giving a dressing of stable manure. Last season we had one acre of sward land by the field where potatoes grew the previous year; both were manured alike and the cultivation was the same. The yield was at least one-fourth less on the sward land, which does not agree with the theory of said writer.

0.12 year ago the 10th of this month, we had 50

hens, mostly the old-fashioned Yankee hens, a few of them crossed with the Poland and Yellow Dorking. In the course of the spring and summer 10 or 12 of them died—raised 53 chickens, and obtained 450 dozens of eggs in 1851. Eggs sold amounted to a trifle over \$62.00. This winter we have a few pullets of the China breed, and are satisfied that they begin to lay younger and lay more in cold weather than any breed we have ever kept.

BATLEY & ALDRICH.

Blackstone, 2d mo. 23d, 1852.

HAY AND GRAIN.

The culture of hay and grain, with the pasturage of cattle, engrosses no small part of the farms of New England. Full three-fourths of all the labors of the farmer are applied to these objects. Take a well averaged farm of 160 acres, 120 of which are said to be in a state to be cultivated, and how will you usually find it subdivided? Probably 30 acres devoted to mowing, 10 acres to the growing of grains, 60 acres to pasturage—the remaining 20 acres, to orcharding, and various other purposes. This is not an unfair view of the subdivision of our farms—and here we see a major part of the whole ordinarily used for the purposes mentioned.

How much stock will be kept on such a farm, when well managed? Perhaps 12 cows, 4 oxen, and 2 horses—supposing it to yield 30 tons of hay, 400 bushels of grain, and a balance of vegetables sufficient to complete the feed of the stock. This, if we mistake not, is a fair sketch of Yankee farm management. Now, on such a farm, it is apparent that the profits must accrue principally from the milk of the cows, and the grain products; and he must be a skilful manager, who can realize an income, over and above the cost of labor, of \$400 a year on such a farm, without charging any interest on the cost of the farm.

If any system of management can be devised, whereby *fifty per cent.* can be added to the crop of hay and grain, without an essential addition to the labor, except that of gathering them in, it is apparent that the annual income of such a farmer will be changed from \$400 to \$600. He who shall demonstrate how this change can be brought about, will be entitled to be classed among the friends of the farmer.

We know it is much easier to imagine castles in the air, than to erect them; but still, it does not necessarily follow, they never can be erected. Stranger things have happened. Who would have believed, thirty years ago, that beef and pork could have been transported from the valley of the Ohio to the shores of the Atlantic, for *half a cent* per pound; and that so great would be the overflow of these products, from these regions, as to crowd our own supplies from the market? May we not, by proper care in tillage, produce two tons of hay to the acre instead of one? Suppose the

earth should be stirred *nine inches* deep, instead of six, and the application of manure should be in the same proportion; and a little more *elbow grease* should be applied to the pulverization of the surface soil, and occasionally a *subsoil plow* should be passed through the next stratum of nine inches of earth below the surface, who can tell what would be the result of such operations? Instead of two tons to the acre, we have well authenticated accounts of more than four tons to the acre having been thus produced. Mr. Clapp, of Greenfield, recently stated that the very last season, he raised four-and-twenty tons of fodder, from six acres—on land not extraordinary for its fertility. What can be done by Mr. Clapp, can equally well be done by others, by the application of the same skill and industry.

The fact is, our farmers spread their butter upon their bread *too thin*—if they would concentrate their energies upon a few acres, instead of many, they would find the results of their labors more encouraging. It would not be difficult to point out those, who by well applied energies, on half a dozen acres, secure a better living, and better income, than many others who possess ten times the quantity of land. When we look at the many acres of unproductive pasture lands that meet the view, wherever you ride, it is impossible to suppress the reflection, that there still remains much room for improvement. Perhaps, more on the pasture lands connected with our farms, than any other. Whether this shall be done by stirring the soil, or by top-dressing with *plaster*, or some other stimulant to vegetable growth, is a fair subject for inquiry.

For the New England Farmer.

PRUNING AND GRAFTING OLD APPLE TREES.

BY N. P. MORRISON.

MR. EDITOR:—If I were as well qualified for handling the pen, as I am of many implements of farming, I would try to contribute through the medium of the agricultural journals many inducements calculated to raise the standard of farming to one of the most profitable and delightful avocations in life. I have had considerable experience in pruning and grafting. The success which has attended my labors, and the profits derived, have drawn my attention more particularly to this branch of husbandry, which I think has been too much neglected by farmers in general. I have found by observation, while travelling in the country, that there are thousands of worthless apple trees, impoverishing the land without giving the owner a fair compensation. Farmers and others ought not to be so negligent of their own interest, as to disregard every inducement which may be found in reading agricultural journals, and otherwise calculated to stimulate them to action, progress and wealth.

As regards pruning and grafting, I have been my own adviser, although I have had friends who are more experienced fruit growers than myself,

frequently caution me in regard to my method of pruning, and they have confidently asserted that my course of treatment would prove a serious injury to the trees. Now I would say to farmers, and all who are concerned in fruit growing, be cautious whom you employ to execute the labor which is necessary to make your trees admirable for their beauty, and a lasting benefit in the production of fruit. I took a journey last June into New Hampshire, and as I went with my own carriage, it gave me a good opportunity of examining the progress which farmers were making in improving the soil and fruit trees. In regard to the latter, I must say that according to my judgment and experience, many are most wilfully, or ignorantly imposed upon.

In Lowell, I had the opportunity of examining the operations of grafting, and I came to the conclusion that the operator shook the trees and caught the birds, while his employer's anticipations would not be realized. The grafting, I think, was done by the job, so much per scion, and the bill for two small trees amounted to almost five dollars, when all the labor which was necessary in doing the work could have been done for less than one half that sum. The number of scions set was too many. One half the number would have been all that were needed to form a good tree. I noticed there were several small branches within a few inches of each other; from six to ten scions were set where there should have been but two, by cutting the limb below where the branches separated. Another error in grafting is, in leaving limbs too near the scions when set, so as to impede their growth; this should always be avoided. Other trees I have noticed frequently while travelling which had a few marks where grafting had been attempted by having six or eight scions set in the low limbs where twenty or thirty were necessary to have formed a good tree. I saw a man grafting for a friend of mine, and as he was an experienced workman, I had the curiosity to stop and examine the trees, and ask a few questions in regard to grafting, hoping to gain some information in so doing. His scions were set in a few of the middle branches, and according to the appearance by grafting so few stems, he did not intend to injure the trees but very little, for the scions would eventually be left, in the few instances above named, to take their own course, consequently they would be overrun with branches and left to wither and die. I inquired why he did not set more scions in a tree? His reply was, the man who employs me wants to make all the cider he can. I suppose he meant until the scions came to maturity. This we see is economy outdone.

I have found some trees which had twice the number of scions set requisite to form a good top, while others fell short in the same proportion. Now it will appear from the many observations I have made, that farmers and many others who have land and trees to improve, feel conscious that something ought to be done in renovating and improving their fruit trees in order to give them a profit which is realized by thousands who have their work thoroughly done. Therefore, give the farmer knowledge, perseverance, (and I must say) temperance, these all combined, will give him the satisfaction of seeing his labors crowned with abundant success.

I have about eight acres of orcharding, and have so managed in pruning and grafting as to

give all the old trees mostly new and vigorous tops. I commenced in 1842, taking off the large and low limbs which were in the way of the team when plowing, and continued the same process yearly until my horses could walk without coming much in contact with any of the limbs. I found that taking off the under limbs (which is too much neglected) increased the growth of what remained, new shoots came forward, which now compose a good part of my trees. Too many large limbs should not be taken from a tree in one season. I have cut off limbs that were six or seven inches in diameter, and have applied cold beef tallow to the trunk where they were cut, and the trees have done well. My pruning is mostly done in Feb. and March, scraping the trees immediately after, which I think well pays for so doing. I keep the land plowed and tilled, where it is not too much shaded. Grafting I have done in April and May. There were about forty large New York Greenings, which proved to be almost barren and worthless. I have grafted all of these, and many more which bore inferior fruit. I have sold the apples which grew on two of them the past season, for over fifty dollars, and the sum total for all the last season will amount to seven hundred dollars. I was informed that sixty-two barrels was the most ever raised in one season previous to my purchasing the farm.

I state these facts for the encouragement of others, that they may see what can be realized in reclaiming and improving old apple trees. The process in setting scions is very simple, but the number needed, and where to be set, in order to give an even and well balanced top, requires both care and judgment.

Trees should be thoroughly examined in order to see where, and how many limbs should be grafted, to give each an equal division or space to grow in, and make a well shaped top. I generally commence at the highest branches and work downward, so as not to interfere with the scions after setting. Do all the grafting to each tree in one season, leaving a few scattering limbs that will not interfere with the scions, for one year, then take off all remaining limbs and leave the sprouts except when near the scions for one year, then cut all, or most of the sprouts, and leave but one scion on a stalk, if the growth has been good, if not let the two remain a longer period. Never graft very low limbs, for they always incline downward after bearing fruit.

Thus, I have given an imperfect sketch of what has come under my observation for a few years past; my object has been to impart a little practical knowledge to all who feel an interest in advancing the cause of fruit growing.

I am aware there are some experienced fruit growers who disagree with me in some respects; all trees should not be treated in the same manner. Trees that have a sound trunk and a healthy appearance, pruned and grafted in the manner I have prescribed, will give satisfaction, I think, to all who try the experiments. All I have to say farther on the subject, is, come and examine for yourselves, and, in so doing, will oblige a friend, and one who has labored hard to acquire a little knowledge of one of the most essential arts performed in agriculture.

Somerville, March 2, 1852.

A. P. M.

N. P. MORRISON'S ORCHARD.

The evidence of good farming is in a succession of good crops, cultivated in such a manner as to yield a fair profit. Under this test, our friend MORRISON, who has a communication in another part of this paper, on "Old Orchards," is a good farmer. We have looked at nearly every tree on his eight acres, and found most of them with well-balanced tops and in a healthy condition. The stems of many of them had been raised from two and three feet in length to four and five by cutting off limbs which were suffered to remain so low down that it was impossible to cultivate, or even walk, under the trees.

Mr. Morrison is a man "after our own heart."—We not only examined his orchard, but saw his interesting family, and ate salt with him at his table, and when these were done, had a trial of skill with him in *music* in the parlor. He had cultivated the Graces as well as grasses, and with his son and two daughters, piano, and a labyrinth of brass tubes in the hands and mouth of the son, there were five of us that made the crotchets and semiquavers fly faster than chaff ever went from a winnowing mill! Because a man prunes, that is no reason why he shouldn't play the piano, but a good reason why he should—he can afford it; and because he sows he has a better heart to sing. We always sing when at work in the vicinage of the birds, and if they like our music as well as we do theirs, all we have to say about it is that they are happy birds, even if they can't sow, and scrape and trim. Farmer MORRISON'S example, in several things, is worthy of imitation, but especially in music and the renovation of old orchards; go, therefore, and see him, and profit by the lessons he cheerfully gives.

PROFITS OF SHEEP AND WOOL GROWING.—Having read articles concerning the profits of farming, I venture the income of a flock of 24 sheep kept by one of my neighbors the past year, which was the round sum of \$74.25, besides 6 lambs that died. He sold his wool at 38 cents per pound, and his lambs at \$2.00 each, with one exception, that for \$1.50. They are of a coarsish grade, but not native. I have bought 19 of the above sheep, at \$2.25 per head, and will give the income of them the present year, when I sell my wool and lambs. —*Granite Farmer.*

NEW SUGAR PLANT.—Representations have been made by a cultivator in the Rhine Provinces, that he has in his garden a bulbous plant, called the "Russian Potato," four or five feet in height, and yielding a third more sugar than the beet-root. It is of an inestimable value to a region unfavorable to the growth of the beet, and it is afforded at a much cheaper rate.—*English paper.*

☞ The social feelings have not been unaptly compared to a dark heap of embers, which, when separated, soon languish, darken, and expire; but placed together, they glow with a ruddy and intense heat.

PEAR-SHAPED QUINCE.

We give a beautiful illustration of this variety of the quince, not because we think it the best kind, but to give in our list of fruits all the leading kinds, so that the cultivator may make his selection among them all. Mr. Downing says "the pear-shaped quince is larger and of finer texture than the apple-shaped. It is rather tough when stewed or cooked, the flesh is less lively in color, and it is therefore much less esteemed than the apple-shaped variety. The fruit is of medium size, oblong, tapering to the stalk, and shaped much like a pear. The skin is yellow. The leaves are oblong ovate. It ripens about a fortnight later, and may be preserved in a raw state considerably longer."

We think quinces make a much better preserve by being kept sometime before using them. We have kept them three months in a damp cellar before preserving, and then found them rich, tender and delicious.

As the quince is only used as a dessert fruit, we would not recommend its very extensive cultivation. There is no such danger with the *apple*, as Massachusetts produces scarcely enough for home consumption yet.

FEEDING CATTLE.

We have taken considerable pains to learn the opinions of men of experience as to how many times and at what hours, cattle which are tied up in the barn should be fed. Working oxen we do not include, because they will scarcely find opportunity to get more than three meals each day. The opinions gathered from the inquiries made, are almost as various as the persons questioned. There are some who have no system whatever; they feed whenever it is convenient; when they happen to be at the barn, or to have *their boots on*. Others, having the barn adjoining the wood-house, and quite handy, "*run out every once in a while and shake up a little*," while others "throw down a good stout foddering and let them grind away upon it."

Now it seems to us that neither of these practices is right—that frequent and promiscuous feedings keep the cattle uneasy, disturb the process of digestion, and is not so well as a more systematic course.

If cows are fed with hay immediately after being milked in the morning, having it placed before them a little at a time so as to occupy them in eating about two hours, they will be able to fill

themselves, and with a supply of pure water, will be satisfied so as to lie down quietly and chew the cud or sleep. If cut feed is given them a less time will be required for them to eat what they will take with a good appetite.

Now if, after taking this course with the cow, she finds all her wants satisfied and is lying in that delectable state, half sleeping and half waking, the digestive mill in quiet operation, and every function in full and healthy action, suppose you step in and shake up a lock of sweet hay, what is the effect? The animal rouses up, tempted by the appearance and flavor of the sweet morsel, and with a cloyed appetite picks daintily upon fodder which she would eat voraciously in the morning. How much the digestive process is disturbed by this we are unable to say; but that it gets the animal into an uneasy, expectant habit, there can be no doubt. Judging from our own feelings, however, occasioned by frequent eating, we should have no hesitation in believing that the process of digestion is considerably retarded and rendered unfavorable for the best health of the cow.

We have always supposed that it is not so much the *large amount* that is eaten that produces milk, fat and muscle plentifully, as it is the amount that is *properly digested* and *thoroughly assimilated* for the purposes desired, as flesh, chyle, blood, &c. A certain time is required to chew the cud, as the digestive organs cannot act without this natural process—if the cud is lost, the animal soon becomes sick. Liebig says that rumination (chewing the cud) has plainly for one object a renewed and repeated introduction of oxygen, for a more minute mechanical division of the food only shortens the time required for solution. A man in a surfeit will scarcely find much benefit from the *quantity* with which he has gorged himself, though it may be of the most nutritious character. Like the mill-stones too freely fed from the hopper, they become clogged, and finally refuse to grind at all.

Cattle turned to pasture where the crop is plenty, usually feed briskly for a couple of hours in the morning, and then lie down for several hours. About noon they will feed a short time and rest again until four or five o'clock, when they feed steadily until taken to the barn.

Will it not be well, then, to reduce attention to our cattle to a system, and ascertain whether we cannot get as much flesh or milk as we now do from a much smaller quantity of food? If so, that surplus will enable us to keep more stock and thus increase our profits.

THE WORKING FARMER.—This paper is now published by FRED. MCCREADY, Esq., at the rooms of the American Institute, 351 Broadway, N. Y. It is about enough for us to say that it is conducted, as heretofore, by Professor JAMES J. MAPES, a gentleman perhaps better qualified to conduct an ag-

ricultural journal than any other person in our knowledge. We like it all but one thing—its form. Give us your agricultural works, friends, in the royal octavo form. No one has shelves for quartos or folios.

For the New England Farmer.

HONEY BEES.

MR. EDITOR:—I noticed in your last number of Feb. 14th, an inquiry as to the cause of the destruction of bees in winter when they have plenty of honey in their hives.

I would like to ask your subscriber, if in those hives which he has seen, the bees were not clustered where there was no honey in the comb? I have not the least doubt they were; then the reason is plain. They died from the long continued spell of cold weather; for had they changed their position in the extreme cold weather, it would have been death; so rather than to break their cluster and let in a chill that would be death to them, they remain and die when honey is almost within their reach. I have noticed many so, and have no doubt that is the cause of their destruction—it is the *long continued cold weather* that destroys them. Some times they die for want of numbers to keep up a proper warmth in the hive; then the anchor frost proves destructive. Bees should be watched close in so *steady* a cold winter as this has been, and if you find a swarm that does not answer to the call, carry them in to a good warm fire and warm them up, and let them change their position, and then return them to their place. To have bees winter well, put your swarms into hives of medium size, and a good swarm in that shape is more likely to winter than otherwise.

Yours respectfully, S. H. STOCKWELL.
Sutton, Feb. 16, 1852.

SKILL IN FARMING.

The farmer has quite as much need of skill and tact in cultivating the earth, as any other class of citizens. Skill, tact, good management, contribute quite as much to success in farmers as hard work. The head must work as well as the hands, and be mutual helpers. In the article of butter, for instance, the same outlay is required to make a miserable poor article as a good one. But rancid butter will not sell in market for half as much as that which is pure, and sweet, and skilfully put up in yellow balls, and in clean, wholesome firkins. It is the skilful dairyman that pockets the most cash and establishes a good reputation for himself and his butter. Just so is it in all the various departments of agriculture. The man who cultivates his mind, and lays up a fund of useful and scientific knowledge, as he cultivates his farm from year to year, is sure to reap a rich reward in the time of harvest.—*Vermont State Journal.*

PARSNIPS FOR SWINE.—In the Isle of Guernsey, the raising of parsnips for swine is a leading branch of farming. The root is almost exclusively used for pork making. A gentleman who once resided there, noticing the peculiarly fine flavor of the pork, inquired the reason of it, and was informed that it was owing to the hogs being fattened on raw parsnips. The pork, he says, was beautifully white, sweet, juicy and firm.

For the New England Farmer.

INTELLECTUAL AND RURAL DELIGHTS.

MESSRS. EDITORS:—I have for some time past perused your paper with much interest, and I must say that I deem it the best paper with which I am acquainted for the farmer and his family.

But it was not so much to eulogize your labors that I commenced this brief epistle, as to write out a few thoughts on the agricultural profession, and to give you some brief details of my experience in practical farming. Of course it would be superfluous to attempt to instruct—my object being to gain information—as I am merely a *juvenis*, having just been admitted to the privileges of the *toga virilis*.

I have, during nearly all of my short life, resided on a farm; and since I have arrived at sufficient age and strength, I have been employed a great part of my time in the practical business of farming; but as I have long made it my rule to be almost always engaged in something useful, not wasting my time in idleness or in unprofitable sports, I have been able to read and study to a considerable extent. Indeed, I have employed a large part of the winters, rainy days and a small portion of nearly every day, in acquiring knowledge.

Thus it may be inferred that as I have been engaged pretty extensively in both corporeal and intellectual pursuits, so I am able to judge in regard to the pleasure produced from each occupation. I speak of this because it is a favorite assertion with yourselves, as well as your correspondents, that there is no other pursuit or business productive of an equal amount of real pleasure as practical farming and gardening. Now I respectfully dissent from this opinion as regards my humble self; for I can truly affirm that while farming has very few enticements for me, intellectual pursuits afford me the greatest delight. And, indeed, for my part, I cannot really see how it can be otherwise with any one who has been engaged in both employments, and who has a true conception of the almost infinite value of intellectual culture.

I certainly would like to know in what the secret consists of finding any real substantial pleasure while engaged in the monotonous business of holding the plow from "early in the morning to late in the evening;" or in continually "digging in the dirt," propping up corn and exterminating tares; or the somewhat less monotonous and filthy, but more wearisome labor, of haying; or in fact, in any of the manual operations appertaining to the farm.

But who can fail to derive enjoyment while perusing the works of the greatest and noblest minds; while studying the character and mode of thought and action of men of genius and wisdom; in fine, while engaged in any of those literary or scientific pursuits which seem to expand the mind and make one a *man*, in the true sense of the term?

The one pursuit is almost entirely sublunary, providing merely for the terrestrial wants of man, while the other is heavenly, *divine*—not only calculated to make one wiser and better, and enjoy those pleasures which he would otherwise be unable to attain in *time*, but also "when time shall be no more" and eternity shall roll on in its everlasting revolutions.

Fearing your patience will be exhausted with too long a communication, I will postpone my remarks

which I intended to make in the present letter on my experience in farming, as well as some inquiries on a subject in which I am much interested.

Northfield, N. H., Jan., 1852.

ANTONY.

REMARKS BY F. HOLBROOK.

To ANTONY:—

Your communication to the *New England Farmer* has been sent to me by my friend Brown, with a request from him that I answer it, which I comply with cheerfully, addressing myself directly to you.

I infer from your remarks that you have just entered upon the career of manhood, and that too, propitiously, with a taste for reading and a desire for the acquisition of knowledge. I trust you are apprised of the importance of a judicious selection of books to be read, books that expand, elevate, and refine, rather than simply divert, or amuse, the mind; and that so selected, you read them carefully, thoroughly sifting them by your own deliberate reflections. A few well-selected books, thus read, will prove of more solid advantage to you, than a whole library, read in a desultory manner.

But to be "a man, in the true sense of the term," as you style it, something more is necessary than even the proper reading of the best books; one must not only be extensively acquainted with other men's thoughts, but must also have the power of originating ideas himself—must be a deep *original* thinker, as well as a general reader. One may be a walking encyclopædia of other men's thoughts, may be able to tell something about almost all kinds of knowledge, and yet be quite deficient in power to originate noble thoughts, and to turn knowledge to useful practical account. If you would be a strong man mentally, then, in addition to your reading, invigorate your mind by draughts from the great fountain-head, by a close and profound study of nature. The poet tells us that—

"Books are not seldom talismans and spells,
By which the magic art of shrewder wits
Holds an unthinking multitude enthralled;"

but that "nature deceives no student;" that here, the eye, the ear, the touch,

"May give a useful lesson to the head,
And learning wiser grow without his books."

There are no pleasures, in the acquisition of knowledge, superior to those we enjoy while studying nature. Her endless variety and beauty of animal and vegetable life; the wonderful principle of life, so variously organized; the landscape of mountain and valley, of lake and river; the phenomena of storms and tempests, which science is now illustrating, and reducing to exact laws;—indeed, every thing, above, beneath, and around us, is full of pleasurable instruction. There are the changing seasons, in all their sublimity and beauty, a contemplation of which is full of delightful instruction, of deeply useful lessons, to both head and heart; and which has called from the pen of Washington Irving one of the finest passages I have anywhere seen. Speaking of the vicissitudes of our American seasons, he says:—"If they annoy us occasionally by changes from hot to cold, from wet to dry, they give us one of the most beautiful climates in the world. They give us the brilliant sunshines of the south of Europe, with the fresh verdure of the north. They float our skies with gorgeous tints of fleecy whiteness, and send down cooling showers to refresh the panting earth and keep it

green. Our seasons are all poetical; the phenomena of our heavens are full of sublimity and beauty. Winter with us has none of its proverbial gloom. It may have its howling winds, and chilling frosts, and whirling snow-storms; but it has also its long intervals of cloudless sunshine, when the snow-clad earth gives redoubled brightness to the day; when at night the stars beam with intensest lustre, or the moon floods the whole landscape with her most limpid radiance; and then the joyous outbreak of our spring, bursting at once into leaf and blossom, redundant with vegetation, and vociferous with life!—and the splendors of our summer—its morning voluptuousness and evening glory—its airy palaces of sun-gilt clouds, piled up in a deep azure sky; and its gusts of tempest of almost tropical grandeur, when the forked lightning and the bellowing thunder volley from the battlements of heaven and shake the sultry atmosphere—and the sublime melancholy of our autumn, magnificent in its decay, withering down the pomp and pride of a woodland country, yet reflecting back from its yellow forests the golden serenity of the sky. Surely we may say that in our climate ‘the heavens declare the glory of God, and the firmament sheweth his handiwork; day unto day uttereth speech, and night unto night sheweth knowledge.’”

You say, “it is a favorite assertion with the editors and correspondents of the *New England Farmer*, that there is no other pursuit or business productive of an equal amount of pleasure with practical farming and gardening.” The assertion may have been often made, though I do not this moment recollect by whom made; it is not an assertion of mine. However, Socrates said, “Agriculture is an employment the most worthy the application of man, the most ancient, and the most suitable to his nature; it is the common nurse of all persons, in every age and condition of life; it is the source of health, strength, plenty and riches, and of a thousand sober delights and honest pleasures; it is the mistress and school of sobriety, temperance, justice, religion, and, in short, of all virtues.” This is a high encomium; and, in general terms, is pretty true. If the condition, all things considered, of a class of persons engaged in any one of the leading practical pursuits of man be compared with that of an equal number, of like intelligence, engaged in farming, the result will be likely to prove favorable to the latter class. Individual comparisons may result quite differently from general ones; for every man is not best fitted by taste and talent for farming, any more than every man is best fitted for preaching. The truth is, the world is wide, every variety of taste and talent is wanted to carry forward civilization, and may find an appropriate sphere of action; and the great point is, for each individual to ascertain his proper place, his own peculiar thing to do; and then if he does that thing, with an energy and decision of purpose which leaps over the obstacles it cannot cast out of the way, he will be apt to succeed, may be useful to others, and will probably enjoy life, so far as enjoyment is granted in this state of being.

To a mind capable of appreciating, as you term it, “the almost infinite value of intellectual culture,” greater delight is undoubtedly found in its pursuit than in the mere execution of the manual operations pertaining to any of the practical call-

ings by which man earns bread. But it is the inevitable lot of us mortals to gain our bread by “the sweat of the brow.” As a general thing, we cannot give ourselves up to the improvement of the mind, but must engage the greater part of our time in hard matter-of-fact labor, only catching the passing hour, as it were, for pure intellectual pleasures and improvements. There are of course a few enviable exceptions to this the general lot, seen in the case of individual men, who, by a peculiarly favorable profession in life, or otherwise, are permitted to luxuriate in purely mental pursuits and pleasures; and there are other exceptions, not enviable, of persons who, for want of a necessity laid upon them of exertion, labor hard to kill time and keep off ennui—of persons who, sweating not in the earning of bread, are made to sweat most tremendously in digesting it. Our nature here is compound, of matter and spirit, and the two must be harmonized as well as may be. In general, if we attend too exclusively to the culture of the mind, giving ourselves up to its cravings under such circumstances, the physical nature will be neglected and enfeebled, which will ultimately clog the workings of the mind, and prevent it from attaining to those useful results it might otherwise reach in connection with a vigorous physical frame,—and so too, if we give ourselves exclusively to mere manual employments, we develop but little mind, and make no advancement worthy of a being gifted with the sublime faculties of intellect; and hence we may perhaps account for your affirmation, “that while farming has very few enticements for me, intellectual pursuits afford me the greatest delight;” you, with your reading of other men’s thoughts, wonder what pleasure can be derived from prosecuting the methods of agriculture; a mere laborer, wonders what pleasure or profit it can be to you to pore over those books: a man employed in pitching over a manure-heap, with a soul but little elevated above a manure-heap, thinks only of the manure-heap, and of getting to the end of it; while a philosopher, taking this laborer’s tools and doing his work, thinks of a hundred scientific principles, all suggested by the manure-heap and the act of pitching it over. If we have the mind to read them, there are deep useful lessons in almost every employment of head or hand, however menial the employment may at first seem; and never was there truer saying than that of the poet:—

“It is the soul that sees; the outward eyes
Present the object, but the mind describes;
And thence delight, disgust, or cool indifference rise.”

The true idea, then, generally, is to combine intellectual with manual pursuits. That such a course will tend to make a full man, a man practically useful, is sufficiently proved by history.—Look at the splendid galaxy of self-made men, who, in addition to carrying forward some practical calling, have risen to the highest eminence, have become intellectual giants,—men who, with freedom from the attenuating physical tendencies of a too exclusively closet-life, have, by their original, elevated, manly and practical mode of thinking, enriched the world by contributions to every department of knowledge. Of the various principal practical callings by which men earn bread, none is more favorable to intellectual culture than agriculture,—as I shall presently attempt to show. The professional man, combining somewhat the culti-

vation of the ground with his other pursuit, will be the stronger man for it, and may ultimately attain quite as desirable a condition as if he had exclusively devoted mind and body to his profession. The farmer who attends to the cultivation of his mind, in connection with that of his soil, is much better fitted to farm it properly and profitably, than if he were merely a manual digger.

I come now to a direct practical answer to your question—"In what does the secret consist of finding any real substantial pleasure in the operations of farming?" Among other things you name "the monotonous business of holding the plow from early in the morning to late in the evening." As too commonly conducted, I grant that plowing is not a particularly agreeable business, and that you have described it quite tersely. Too many plowmen, having little or no thought about the true philosophical principles of their business, are more anxious to get over the greatest possible breadth of land in a day, than to do proper and the best work. They cut their furrows too shallow, and as wide as, or wider than the plow can possibly turn them, and what portion can not be got over with the plow aided by the foot of the plowman, rolls back into its bed again, and the next time round its "grass side up" is put out of sight by the "cut and cover" operation, making a high ridge of earth with a deep hole beside it. The furrows are also very crookedly cut, and therefore do not match together at all well. The plowman twists and turns himself in all manner of shapes, is vexed with his plow, scolds at and whips his team furiously, labors and tugs and sweats away, "from early in the morning to late in the evening," and can show you as big and as mean a day's work as you could wish to see, with hardly a rod square of passably good work in the whole piece. I would not allow such a workman to plow a day for me, if he would do the work for nothing, and pay ten dollars for the privilege. But if properly conducted, say for ten hours in a day, which is all a merciful man will require of his animals of draught, however he may be disposed as to himself, plowing is one of the finest and most exhilarating employments in all the world.

Did you ever investigate the accurate philosophy of the plow and of plowing? Take a highly improved modern plow and study it. Look at it as a whole implement, and at its several parts, and reflect what a world of profound study it has cost to produce that same implement. What high mechanical principles it involves, and how beautifully do they combine together to produce an exact and most valuable result. There is the mouldboard alone, although an exact mathematical combination, yet it is a problem for you, (I speak advisedly,) which, if you have not solved it, its solution will give you a pretty sharp brush, with all your mathematics. Then too a combination of mathematics, a little varied to suit each case, will give you the best form of mouldboard for sandy and gravelly soils, for clay, and heavy moist soils generally, and for best working stubble land. The plow best adapted to sandy, and generally light, dry soils, will lay flat furrows, accurately shut in beside each other, thus preventing a too great natural tendency to evaporation, incident to such soils. Your mathematics will show you that a coulter set bevelling to the land, an inclined landside to the plow, and a concave-

lined mouldboard, all contribute to facilitate the laying of flat furrows, and that it would be difficult to drop the edges down accurately beside each other without these several provisions. The plow best adapted to clay and other heavy or moist soils, cuts rectangular furrows and lays them at an inclination of 45° to the horizon. Your mathematics will show you that this is the best position for the furrows of such soils to be placed in. It can be undeniably demonstrated that none but rectangular furrows, whose depth is to their width as two is to three, *can be laid at an inclination of 45°* ; that rectangular furrows, whose depth is equal to two-thirds their width, and which are laid at an inclination of 45° , present, in their projecting angles, a greater surface of soil to the ameliorating influences of the atmosphere, and greater cubical contents of soil for the harrow to operate on in raising a deep fine tilth, or seed-bed, and permit underneath them a freer circulation of air, and passage from the surface of superfluous moisture, than furrows of any other form or proportions that are practicable to be turned. The plow in the very best manner adapted to the working of stubble lands, will be higher in the beam to enable it to pass obstructions, and shorter in the turn of its mouldboard, than either of the preceding, will have a greater depth of iron in the back parts of the mouldboard, which will tend to throw its loose stubble furrow all over to an inverted position, and leave a perfectly clean channel behind it for the reception of the next furrow. Thus you see there is quite a philosophy in plows and in plowing,—which the intellectual farmer is bound to understand.

However dull and monotonous the business of plowing may be to you, it is not at all so to me. Starting my team a-field of a bright spring's morning, with my plow all bright and clean from its winter quarters, I feel as honest a pride and pleasure at the thought of my occupation as I ever do when engaging in any employment. I strike out my lands with a furrow as straight as an air line. After this is accomplished, I gauge my plow to cut deep furrows, and as narrow as is possibly compatible with the depth, and then take them off the land of uniformly exact depth and width, never allowing a crooked furrow to be seen in my plowing. To me it is very exhilarating to see the furrows roll off my polished mouldboard, and lay beside each other with as accurate a finish as though they had been jointed by a carpenter's tools, and to think, as my eye surveys the smoking soil thus prepared, how mother earth always delights in bountifully rewarding the careful husbandman,—that she invites a liberal, intelligent and accurate cultivation, by returning as compensation a greatly increased crop. I say to myself that I am one of the number engaged in an operation without which man would not have bread, civilization could not advance or be sustained, and which was one of the fundamental operations early contributing to elevate man from the barbarous state, and fix him in the abodes of civilization. I remember that the plow has been regarded with a sort of sacredness by men in every age, that even far back—

"In ancient times, the sacred plow employed
The kings, and awful fathers of mankind;"

and that now, it employs many of earth's choicest spirits. This occupation brings me fine health,

refreshing slumbers, and while engaged in it, I can think as accurately as under any other conditions whatever. Indeed, if I were called upon to prepare a public address, an article for the press, or to engage in any other intellectual exercise, I could fix upon and arrange my subject, and bring to it quite as much vigor of thought and shape it into as logical an arrangement, as under any other circumstances.

My friend, you will find more or less philosophy connected with the proper performance of almost any of the methods of agriculture; and that many subjects, requiring further scientific inquiry, exist in even the commonest operations of husbandry. Your soils need to be fully understood, that you may supply their wants and correct their superfluities. The various ingredients or properties of your manures must be known, together with the theory of composting, and must be applied properly. The properties that go to make up your crops must be found out, so that you may best adapt the crops to the soil, or if your soil is deficient in ingredients requisite to the raising of some desirable crop, they must be supplied by proper manures and cultivation. Fruits, for home-use and for sale, must be produced, and a world of scientific investigation may be well employed, in finding out their best management, the character and habits of insects injurious to them, and the best means of preventing their depredations. The wet lands must be properly drained, which requires a combination of science with practice. Irrigation produces wonderful effects, may perhaps be within your reach, and its theory and best management must be found out. The philosophy of breeding domestic animals, a beautiful and interesting study, generally poorly understood and miserably practiced in our country, must be investigated.

So I might go on, enumerating a great variety of subjects, or entering into detail with those I have glanced at. But these now named are sufficient for illustration, and they show that an absolutely limitless field of inquiry, involving the principles of several sciences, is opened to the farmer, in the prosecution of his daily business. It is his high privilege, in the very act of earning his bread, to come into intimate contact with the wonderful operations of nature. If he be a man fond of intellectual inquiry and improvement, he will be convinced at every step in his pursuits, that to be "a workman that needeth not to be ashamed" of his farming, he must keep his mind all awake and in action, and by observation and study must endeavor to understand nature. The more his mind rises to a perception of the works of Deity, the more will it be filled with astonishment and delight at their minuteness and comprehensiveness, their beauty and grandeur, and so far as he can follow them, the exact laws which regulate and control all animate and inanimate nature. In proportion as he closely investigates, so will he perceive that the meanest of those works is inexhaustible; and therefore I say, show me a man of such high endowments of mind, or such scientific attainments, that his every energy may not find full employment in unravelling nature as connected with practical agriculture, and will not, after all his efforts, be constrained to admit that there are yet unexplored regions beyond his researches, and I will show you a man, the equal of whom does not exist; and I

further say, that farming is not necessarily that merely "sublunary pursuit, providing only for the terrestrial wants of man," which you suppose it to be; but on the contrary, properly understood and conducted, it combines as much of the practical and scientific, has legitimately connected with it as much of the poetical and sublime, is as dignified in itself, and as elevating to the mind of man, as any other pursuit; and leading us directly to a perusal of the works of Deity, as written on his ample page of nature, we may emphatically gain that knowledge, fresh from the fountain-head, which is "not only calculated to make us wiser and better, and to fit us to enjoy pleasures which we would otherwise be unable to attain in time, but also when time shall be no more."

I have been thus earnest in stating the case as I understand it, because our agriculture has been quite long enough cursed with a prevailing sentiment that the farmer does not need much knowledge, and could not use it practically and profitably if he had it. It is claimed by many that the principles of correct cultivation are few, and all found out; that farming is a mere monotonous routine, for physical labor to conduct; that he is the best farmer who can do the biggest day's work with his hands, who can skin his farm the cleanest and put the proceeds of its fertility at interest, expending little or nothing for the improvement of himself and family, and nothing to make home attractive.

Talk to many of our people of the advantages of applying the sciences to the cultivation of the ground, and about better educating the farmer, and they will tell you that it is simply ridiculous nonsense. I say that these things are a curse to agriculture every way; and particularly so because many of our brightest and most enterprising young men, sickening at the thought of engaging in a pursuit thus advocated and practiced, and unwilling

"To drudge through weary life without the aid
Of intellectual implements and tools,"

go off to other pursuits, when, if they could have had one-half the thorough training to fit them for farming which they were obliged to go through to be prepared for some other pursuit, we should now see much more of correct, profitable cultivation than is seen.

I have to say to you, in conclusion, my young friend, that if you wish for a field of honorable usefulness second to no other, for a naturally dignified pursuit, where cultivated intellect may find full scope, where by a practically judicious application of the natural sciences which illustrate agriculture you may wield a large influence for good to others, then stick to your farming. True, it will not bring you great wealth; that is with difficulty attained, by comparatively a few; it usually requires of him who seeks it the devotion of his every energy, while it is not his greatest good, but but sometimes proves an evil, either to himself or children. But an enlightened cultivation of the earth will give you a competence, and will prove favorable to mental culture and virtue. Your home, though modest and unexpensive, may be adorned in many little ways which will tend to make it the tasteful and fitting abode of virtue. A moderate outlay will, in these days of improvement, furnish you an assortment of the very best books, so that seated before your hearth you may

commune with the choicest thoughts of gifted men. While abroad in the fields, nature will give you lessons of the deepest import. Your lands will furnish you a laboratory for the testing and practical application of science. These things are within your reach—not like wealth, difficult, and hard to be won, and only by a few,—they are

"No special boon
For high and not for low, for proudly graced
And not for meek of heart. The smoke ascends
To heaven as lightly from the cottage hearth,
As from the haughty palace. He whose soul
Ponders this true equality, may walk
The fields of earth with gratitude and hope."

Brattleboro', Feb. 24, 1852. F. HOLBROOK.

A NEW DEPREDATOR.

Walking near the woods in December last, we noticed a small flock of birds flying among the bushes and apparently feeding upon their buds. Flitting from bush to bush they presented a beautiful appearance as the sun glanced upon their bright feathers. Having no gun we were not able to obtain a specimen, and saw nothing more of them until within a few days, when they approached near our dwelling and were found feeding on the apple tree buds. A flock of about a dozen visited some large trees that stood near each other, and in the course of two or three days the snow was covered with mutilated buds as though chaff had been sown upon it. On examination we found the blossom buds cut open smoothly on one side, the centre taken out and the hull or outside dropt upon the snow. One of the birds was then shot and proved to be the female *Pine Grosbeak*. It is nearly as large as the robin, has stout, short beak, is generally an ash-color with dull yellow on the back. The color of the male is purple breast and back, and he is somewhat longer than the female.

These birds occasionally visit us, we understand, from higher latitudes, and have been seen in unusual numbers this winter. Is it because the weather has been so extremely cold, that they have found it congenial to their habits? Perhaps we have too hastily pronounced them "depredators." We may not know all their business here. At any rate, they are welcome to a breakfast from our trees, be it bugs or buds, as some compensation for their delightful company in these stern winter days.

WESTERN RESERVE FARMER AND DAIRYMAN.—This is the title of a new periodical, devoted as its name indicates, and published at Jefferson, Ohio, by G. B. MILLER. R. M. WALKER and N. E. FRENCH, Editors. It is printed in book form, on handsome type, and is filled with well-written editorials and judicious selections. We have selected its article on the "proper time for felling timber" for our own columns. There is plenty of room, fellow-laborers—go on with stout hearts.

☞ We would call attention to the article upon the "Races and Varieties of Animals," which has

been kindly furnished by LEMUEL SHATTUCK, Esq., author of the *History of Concord*, and a gentleman of fine literary taste and acquirements. We hope to be favored occasionally with the productions of his pen.

For the New England Farmer.

THE HISTORY OF THE APPLE TREE.

BY S. P. FOWLER.

[CONTINUED.]

The canker worm has appeared at intervals, in the eastern part of Massachusetts, during a period of one hundred years. It is peculiar to this country, and differs from the Winter Moth of Europe, described in Kollar's Treatise. Some writers upon the cultivation of fruit trees, when describing the canker worm, have made great mistakes. The author of the *Fruit Culturist*, published in New York, has copied the Baron Kollar's female figure of the European Winter Moth erroneously for our canker worm grub. Thus giving our female wings, which, very fortunately for the cultivator, it does not possess. We have never yet seen a better way of destroying this vermin, than by the old method of tarring the trees. To prevent the ascending of the female, we have been in the practice, when trimming our trees in the autumn or winter, or perhaps early in the spring, to place the limbs taken off, around the trunk of the tree. By so doing, in many cases, they will ascend these prostrate branches to deposit their eggs, instead of the tree. Care should be taken to remove these branches to the brush heap, before the worms are hatched.

The insect called the autumnal caterpillar, that feeds on the leaves of the apple, pear, elm and other trees, has become very numerous of late years. They live in small colonies, and at their first appearance do not attract much notice. But as they increase in size, they commence their ravages and inclose the leaves, branches and fruit, on which they feed, with their web, rendering themselves conspicuous and unsightly, to the most careless observer. To the careful and observing cultivator, they can easily be destroyed, when they first appear, the whole swarm being found on one or more leaves. I am of the opinion, as these insects appear late, the trees do not suffer so much from the loss of their leaves, as they do earlier in the season from the ravages of the tent or lackey caterpillar.

The Woolly Aphis, or American Blight, is now attracting the attention of the cultivators of the apple tree in this country. Doct. Harris says, this insect had been noticed in England as early as the year 1787, and has since acquired there the name of American blight, from the erroneous supposition that it had been imported from this country. With us this insect, or something like it, has made its appearance where there was a flow of sap, caused by the amputation of limbs in summer pruning; also under grafting clay, they have been noticed in great numbers, sucking up the sap flowing from the wounded stump, to the great detriment of the growth of the grafts. We discovered last season the Woolly Aphis in great numbers, upon the branches of a purple beech, which were effectually destroyed by the application of a solution of whale oil soap. Plant lice of every kind can usually be destroyed in this manner. The

apple tree is subject to few diseases, when under proper care and cultivation. In fact, but few kinds of trees will continue to live and bear fruit when suffering from long and continued neglect so well as the apple tree. The canker is a disease, says Forsyth, incident to trees, which occasions the bark to grow rough and scabby, and turns the wood affected to a rusty brown color. The appearance of this disease, we have more particularly observed upon the pear, than upon the apple tree. To the neglect of pruning at a suitable season, and in a proper manner, may be ascribed the most usual form of canker, which frequently commences from the badly amputated limb. Our method has been in arresting this disease, to cut out all the dead or discolored bark, and apply to the wound a thick paint made from red or yellow ochre, with a brush. We prefer this paint for reasons, which we shall give in our remarks upon pruning, to Mr. Downing's composition of alcohol and gum shellac, or that used by Mr. Forsyth. The last named gentleman, in his time, made a composition, which was used by him in curing diseases, defects and injuries in all kinds of fruit and forest trees. This was compounded with great care, labor and inconvenience, and was supposed to possess great efficacy, as a medicament, when applied to a diseased tree. But this notion was exploded, if we remember right, by an English cultivator, Mr. Knight, some years ago.

Since the cultivation of the apple for the manufacture of cider has in a good measure ceased to be an object with the farmer, his attention has been given to the culture of superior kinds of fruit for the market. These cultivators having more or less of those old cider apple trees on their farms, the question is frequently asked by them, what can I do to renovate these trees, and make them produce good fruit? Will grafting them answer a good purpose, and will scions do well in these old limbs? In answer we would say, as a general rule, it is labor lost to graft these old tops. As the whole subject of the restoration of old fruit trees, whether decayed or not, together with that of pruning, is one of considerable importance, and will necessarily exceed my limits in this communication, I shall defer its further consideration to a future article.

S. P. F.

Danvers, Feb. 19th, 1852.

LICE ON APPLE TREES.

A friend from Pittston has sent to our office a branch of an apple tree all encrusted over with little greenish scales that look like minute muscle shells.

They are not uncommon to young apple trees, but are a serious trouble, and very injurious to their growth. They are formed by a little fly, which lays an egg or two on the branch and then covers them over by this scale which protects them from the weather. Here they lie until hatched by the warmth of spring, when the worm perforates them and creeps out. If examined by a glass of moderately magnifying power, they can be clearly seen.

A good method to prevent and destroy these, is to make a lather of whale oil soap, or if that cannot be obtained, common soft soap of the kitchen will do. Take it in the hand and rub it on. It is said a wash of quassia wood steeped in water, will

destroy them. A lye made of a pound of potash to two gallons of water, and applied with a swab, is sometimes used—or a lye made of common wood ashes, not very strong, may be applied in the spring, before the leaves start.—*Maine Farmer.*

SEVENTH AGRICULTURAL MEETING,

AT THE STATE HOUSE, FEB. 24, 1852.

Subject for discussion—GRASSES AND GRAIN CROPS.

HON. ISAAC DAVIS, of Worcester, presided at the meeting on Tuesday evening last. On taking the chair, after alluding to the dignity and honorable character of the occupation of the farmer, he said that the subjects for discussion—*Grasses and Grain Crops*—were very important,—the one furnishing daily food for animals and the other giving bread-stuffs to the world. He who looks into these subjects and fully understands them, understands the great scientific part of agriculture. He is a learned man in agriculture. Such the speaker did not profess to be. But he would throw out a few intimations which might perhaps draw out from others more valuable information upon the subject. He said that grains, which with us are divided into a few classes, are generally cultivated with a better understanding than the grasses. The grains are not cultivated so well here as in the old countries, mainly for the reason that our lands are much cheaper. There, the farmer after preparing his ground for the seed goes over it with a roller cutting it into grooves. The seed is then cast in and the plants come up in rows and are weeded with as much care as we weed our onion beds. We sow our seed broadcast and the wheat and tares grow together, the latter absorbing no small portion of the nutriment of the soil. This will be the case until our land becomes more densely populated and more costly. To grasses we have given less attention than to grains. It is not necessary that the farmer should understand the great variety of grasses as the botanist does, and be able to classify them, but he should know those which contain the most nutriment for his animals, and their combinations, so that in laying down his lands, he may so intermix them as that a new kind of grass will come up every month. In the old country it is the practice to sow from four to ten kinds of seed, according to the length of time which the farmer wishes to feed from his land. This is the reason why more feed can be obtained from a certain number of acres there than here. Our pasturage here is not so good as there, because we do not go into an analysis to see what kinds of grasses will best combine to furnish the most nutriment. And why we do not do so, is owing in a great measure to the fact that our land is so plenty and so cheap. He believed the time to be at hand when our system in this respect will change, and that time will be when the proprietor of the soil and not the tenant is the cultivator.

On motion of Mr. HUBBARD, of Sunderland, it was voted that hereafter the speakers be limited to ten minutes.

Mr. HUBBARD then addressed the meeting upon the subject of wheat-growing. He said that notwithstanding the interest manifested on this subject some years since, and the encouragement of it by bounty from the State, a feeling seems now generally to prevail that wheat is among those products that cannot profitably be produced in Massachusetts. A short time since, at a meeting to organize an Agricultural Society in his county, the opinion prevailed that there was so little encouragement for the farmer to raise wheat, that it was not worth while to offer a premium for it. He believed that there is no difficulty in producing wheat in Massachusetts, and probably in every county in the State. There might be some doubt as to whether we could raise it so as to compete with the West. The same objection might be urged against the cultivation of Indian corn, and yet farmers in every part of the State cultivate corn. Why, then, should they not devote a portion of their land and their labor to the cultivation of wheat? He then proceeded to answer the question, can we raise wheat in Massachusetts, by giving certain facts which had come under his own observation. He said there were farmers in Franklin county who had raised wheat for twenty years, and they testify that they have no more difficulty in getting a good crop, than in getting a good crop of Indian corn. In the autumn of 1850, he plowed a piece of land from which, six weeks before, he had taken a crop of clover. He had mowed it for two years. The land, which was warm, dry, sandy loam, was not in a high state of cultivation—after plowing in the clover to the depth of 7 or 8 inches, he let it remain 8 or ten days and then harrowed it. He then sowed six bushels of ashes to the acre and $\frac{1}{4}$ of wheat. In the spring, he put on five bushels of air-slacked lime, and harrowed again in April, and he here observed that it is the custom there, to harrow grain lands in the spring. He cut it at the usual time, and the result, very liberally measured, was thirty bushels. The amount of land was a little less than an acre. A neighbor of his, on land to which neither lime or ashes were applied, but into which was plowed corn stubble, had raised from less than an acre, 37 bushels and 20 quarts of wheat. In several towns in that neighborhood, even better crops than this had been obtained. He came, therefore, to the conclusion, that wheat could be raised with profit in Massachusetts.

Mr. BARDWELL, of Hatfield, said he came from a town which probably raised more wheat than any other town in the State. The wheat crop had been steadily increasing for years, and last year it exceeded in his town 2500 bushels. The present year, if favorable, he thought it would be from

three to four thousand bushels. The average yield is about 25 bushels to the acre. But a few go as low as 20 bushels to the acre. And he had known of one 4 acre lot producing at the rate of 38 bushels per acre. Farmers there follow either clover, broom corn or Indian corn, with wheat. It is, however, thought that it generally succeeds best after clover. It does well after corn, if the stalks are plowed in. He considered wheat a lucrative crop to raise. The straw will pay for two-thirds of the labor. The wheat is worth on an average, \$1.25 per bushel. The soil is alluvial, and the wheat succeeds best on that which is clayey. Ashes are sown in the spring as a manure. He considered wheat as sure as any other crop.

Mr. POMEROY, of Hampshire, said the question whether we can raise wheat to advantage, seems to depend upon another question, which is, whether we have in our soil, or can afford to put into it, those ingredients of which wheat is made. He thought there was no special mystery about the matter. If the farmer raises a very large crop of straw and finds there is no wheat on it, what he wants to know is, how to make that straw produce wheat. And here is where science (which those who contend that *practice* is all that is needed, overlook,) comes in to analyze our soils, and ascertain what ingredients are wanted. We want an institution to teach this science—to give us this information. By Dr. LEE's report it appears that these substances are very simple—and we can raise wheat if we know how to supply them. Thirty bushels of wheat taken from one acre contain over 200 pounds of mineral substances, and this could not be long taken yearly from the land, without impoverishing it, unless it was in some way supplied. Upon two acres of land from which he had taken a crop of potatoes, he had put 40 oads of manure; 70 bushels of air-slacked lime, costing 6 1-4 cents a bushel; 2 bushels of salt, and sowed the Golden Australia wheat, a bushel-and-a-half to an acre. Having thus used the necessary means, he expected a crop in the time of harvest. He closed by alluding again to the necessity of science to teach the farmer how to supply the ingredients of his soil to adapt it to a particular crop.

Mr. BUCKMINSTER, of Framingham, made some remarks in regard to the wheat growing lands of the Scioto valley in Ohio, the richest in that region—and said that an analysis of them, had shown that they do not contain one per cent. of lime. In Massachusetts, we have on an average two per cent. of lime. According to this view, one bushel of lime to an acre, was sufficient to raise wheat. Lime would not do on his land. Where the land is infused with iron ore it will work, and no where else. He said lime is not a manure and will not enrich land.

Mr. HOWARD, of the *Cultivator*, said the soil in

Scioto valley was comparatively destitute of lime, and was not generally considered good wheat soil. It was chiefly remarkable as a good soil for corn. The best corn grounds are not good for wheat. The necessary amount of lime to be applied to wheat lands cannot be determined by any specific rule. The best wheat lands so far as ascertained, show never more than 2 per cent. of lime; and if it is true that one soil contains two per cent. of lime, he should have no hesitation in saying that wheat can be produced to advantage. In the great wheat soils in Russia, it had been ascertained that there is but little lime—and the same fact has been discovered in regard to the richest wheat growing section of New York—Seneca county.

Mr. BARDWELL, by way of explanation, said that farmers in his vicinity always soaked their wheat in a strong brine, and rolled it in air-slacked lime before sowing it.

Mr. HUBBARD defended the theory of applying lime to lands on which wheat is cultivated and gave instances where it had been done in Maryland with great effect.

Mr. PROCTOR, of Danvers, next spoke and changed the topic of consideration to that of the culture of hay, in which he said there was great room for improvement. He did not believe the average yield of mowing lands throughout the State would exceed one ton per acre, and thought it could be doubled by deep plowing and the application of such manures as can be found upon the farm. He mentioned the result of this course in the case of Mr. CLAPP, of Greenfield, who, from a lot of six acres increased his crop from 6 tons to 26 tons—[Mr. HUBBARD said that he understood Mr. CLAPP's statement to be, that from 7 acres he got 6 tons to the acre or about 42 tons in all.] This was done by the introduction of the subsoil plow and good manuring. Mr. PROCTOR also spoke in regard to improving pasture lands. It can be done either by carrying on plaster or by deep stirring. He had known crops on pasture lands to be doubled by simply setting out locust trees.

Mr. SPRAGUE, of Duxbury, gave his experience in raising corn. It was, he found, the most profitable crop he could raise on his land. The yield is from 40 to 80 bushels per acre. Forty cents a bushel, he thought would pay him for raising corn, as well as 75 cents for rye, or \$1 for wheat. He did not believe lime was a manure. It did not benefit his land. The best grass in his vicinity is the "Burden grass." In cultivating his ground for hay, he applies his manure to the surface. With a top-dressing once in three years, there would be little difficulty in keeping grass lands in good order.

Mr. MOTLEY, of Dedham, produced some statistics showing that the hay of Massachusetts

growth used in Boston, was not a fifth of the amount used. The rest comes from Maine and New Hampshire. He had sent to Maine to get some information in regard to the raising of hay there. The answer he got was—that the average yield is about $1\frac{1}{2}$ ton per acre; expense of making, \$2,50 per ton; screwing and hauling \$2,75 per ton; the land is kept up eight or ten years and is considered worth \$60 per acre. Other investigations had convinced him that the yield of hay had not diminished in Massachusetts as fast as in the other New England States. The only State in New England which leads us in the proceeds of the hay and dairy, is Vermont. He contended that Massachusetts is not going behindhand in her agricultural products.

For the New England Farmer.

TRANSPLANTING POTATOES.

MR. EDITOR:—My first experiment was in 1848, and was merely to ascertain whether the potato could be transplanted successfully or not. The result was, a couple of bushels of fine, nearly ripened potatoes, by the middle of July. The next year I prepared to plant the whole of my land in a similar manner. I planted the middle of March under glass, such as is used for forcing lettuce, and cucumbers. I also had a small glass grapery, which I used for the same purpose in addition to raising grapes. I removed about 3 inches of the top soil and placed the seed in it, as close as they would lie together and then replaced the soil; the middle of April the plants were about 3 inches high, and I now prepared to put them out into the garden, in the usual way of manuring in the hill; the plants can be taken out of the bed with a shovel, and by keeping them dry at this time, they easily separate. I now placed them in the hills on the manure, and at this time, as frosty nights are not over, I hilled the earth entirely over the plants. In 4 or 5 days, the plants were bursting through the top of the hill, which served for the first hoeing. The sprouting bed being now clear, I planted squash seed in it, and in May, transplanted them into the spaces between the rows of potatoes, at proper distances. About two-thirds of the land was thus set out with squash plants. In May, I also planted potatoes on my grape border, as before, for transplanting. These were the black, the others, the white Chenango, and when 5 or 6 inches high, transplanted them into the spaces between the rows, on the other part of the garden.

On the 3d of July, I commenced digging the first crop of potatoes, and hoeing the second at the same time. By the end of July, the ground was cleared of the first crop of potatoes, which I sold in Salem market at 2 dollars a bushel, and they were retailed as high as \$4. The squash vines now had possession of the ground, from which I took in the fall a very large crop of squashes. And now comes the 2d crop of potatoes, which were fully equal to the first, in point of size and quantity, but affected with the rot, which the first escaped. Specimens of the two crops I sent to the Agricultural Exhibition at Salem, for which I obtained a premium. The next year, 1850, I prepared to experiment on a more extensive scale. I

cut and planted as before, six bushels of potatoes.

I transplanted into my garden the middle of April, as before. In May, I went between the rows of potatoes, and with a hoe made a small hole in which I planted corn at regular distances, without manure. The 3d of July, I commenced digging the potatoes and hoeing the corn at the same time. The potato vines, I put into the hole, as I took the potatoes out, which served as manure for the corn, which bore me a good crop, well ripened.

The result of this is, or seems to be, that two crops can be raised on the same ground the same season, and the potatoes secured against the rot, which takes the vines in August, which, if left until fall, would, I have every reason to believe, be sound, as they are so far advanced at the time the disease attacks them.

Truly yours,
SAMUEL B. NICHOLS.

Wenham, Jan. 5, 1852.

For the New England Farmer.

ABOUT PIGS AND PIG-PENS.

BY SILAS BROWN.

MR. EDITOR:—Since potatoes have become too scarce to feed swine upon, there are but few people who can afford to winter over pigs for their next year's pork. An estimate of the expense of feeding pigs from the weaning in summer or fall to the next spring or summer, whether fed on grain or roots, in this section of the State, will amount to as much or more than we pay for drove pigs in the spring after being wintered. Since it has become a common practice to purchase of drovers, we have to take such stock as they have on hand, which are mostly bred in the Western States where the breeders of such stock are not very particular in selecting (if I am not mistaken) the best kind of animals to breed from. I have been in the practice of buying my pigs from droves for a number of years, but have seldom got one of a good breed; the most of them are coarse haired, thick skinned, long eared, long snouted, long legged, slabsided, and greedy-mawed sharks, better adapted for racers than making palatable pork. The same amount of food consumed by one of this every way long breed to fit him for the knife, given to a pig of a good breed and of an opposite description, will produce from 12 to 50 per cent. more pork, if I am not extremely wild in my "flights of fancy." I have not skill enough to designate and give names to the different varieties of the grunting fraternity, or to apply the titles to emigrants from different English counties, or to trace their pedigrees back to their bristly vociferous ancestors, and therefore, I shall acquiesce in submitting to the judgment of the stock breeder to select the Middlesex, Suffolk, or animals of any other description which will meet the approbation of the public.

I know of no animals among us so far in the rear of "good breeding" as our pigs from the West are. It would decidedly be a point of economy and a benefit to the swine breeder as well as the purchaser, to select the best and most approved animals for breeders. Every farmer or swine breeder by a little observation and care can improve his swine by crossing with the breeds which have the best marks and give the most credit for

being fed well. If our western producers would improve their races of swine, and send us well built and handsome pigs, they would not only be gainers, but would confer a favor on the purchasers in New England. Their good likely pigs would be better worth six cents a pound, than those misshapen apologies for hogs would *three* which compose the most numerous part of the droves sent us. We, New Englanders, cannot compete with our western friends in swine breeding for market; at the West every kind of animal food and food for animals is produced in great abundance, and the rapid conveyance to market by steam, instead of the old tardy and expensive process of driving, will give the western farmers the privilege of supplying our markets at the North, if they see fit to improve and send us a better breed of swine.

While on the subject of pig breeding, I will suggest an improved plan of constructing a cheap platform to facilitate grunter's operations in making manure. About 20 years ago, I found my hogs had penetrated too deep in their pens by rooting up large quantities of gravel and sand unfit to make manure, and we floored over one pen with thick plank; the other, for the want of plank and flat stones, we paved with cobbles, in a similar manner to street paving. The pen paved has answered every purpose for a floor for the hogs to work upon at composting manure. The plank floor began to rot after a few years, and all decayed away years ago, while the paved pen continues good, the hogs not starting a cobblestone to the present time; and the pavement has improved, if any alteration has taken place, and become more compact and smooth. The planks used in one pen were worth 26 dollars a thousand; the pavement cost nothing but the labor of placing the stones; in this case the cheapest is best and best cheapest.

I have been of the opinion, for many years, that pigs are injured by driving to market; they do not thrive as well as those bred in the neighborhood; many of them are troubled with a bad cough. I purchased one that had a cough and did not thrive well, and on cutting him up, found several of his ribs had been broken; many of them have tubercles in their indurated livers, which will prevent a healthy action of the digestive organs and a rapid accumulation of fat. Hurrying or over-driving swine, (if not injured by blows,) will cause a rapid circulation of the blood, and consequently unnatural heat and fever, which hinders their growth and produces diseases of the liver and lights, and renders them of little value. It takes a long time for a "sick pig" to recover, after being heated by driving, by which the purchaser is the loser in the growth and keeping.

S. B.

Wilmington, Dec. 15, 1851.

RECLAIMED LAND.

John Shipman, of Amherst, gives the results of his labors in reclaiming fifty acres of swamp land, in a report made by him to the Amherst Agricultural Society. This land, when commenced upon, more than twenty years since, was a regular pent swamp, and worth comparatively nothing. In 1849, forty acres of it produced 10,000 bushels of potatoes. At various times, eight acres of it have produced 600 bushels of corn; ten acres, 2,500 bushels of potatoes; broom corn at the rate of 600 pounds per acre; and last season, fifteen acres produced more than 1,700 pounds of tobacco per acre.

The present worth of the land is \$6500—considered a low estimate; net profits, \$4831.

REMARKS.—The above shows the effect of cultivation in a striking degree. So far as the latter crop is concerned, however, the land had infinitely better have remained in a "worthless peat swamp."

For the New England Farmer.

RACES AND VARIETIES OF ANIMALS.

MR. BROWN:—The Natural History and varieties of mankind have recently received an increasing attention. In a work on the subject, just published by Dr. William B. Carpenter, an eminent English physiologist, the author has referred to the statements in the subjoined paper to prove, that from the accidental or "spontaneous" production of a peculiar form or variety of animals, and, by analogy, of man, a new type or race may become permanent and be perpetuated. The article was communicated by Col. David Humphrey to the Philosophical Society of London, and published in their transactions for the year 1813. The importance attached to the statements by Dr. Carpenter and others—intelligent agriculturists as well as scientific men generally—induces me to ask the use of your valuable journal for its republication. In doing it, I desire to call the special attention of your readers and correspondents to some queries, having a general bearing, which the subject suggests:—

1. Are the statements given in the article founded on facts within the recollection of any one now living? and are there races of sheep of the form and description here given now existing in New England? and, if so, can they be traced to the Dover breed as their progenitors?

2. Are there any well authenticated facts existing to show that a *new* and *permanent* race or type of any domestic animals can be produced under circumstances similar to those here stated?

If any substantial facts and illustrations on this subject are known to any of your intelligent correspondents, they would subserve the progress of science, and promote the real interests of the agriculturist, by their publication.

L. S.

Boston, Feb. 17, 1852.

Humphreysville, (in the State of Connecticut,) Nov. 1, 1811.

SIR:—I propose to give some account of a new variety in the breeds of sheep, which has lately sprung up in America.

Seth Wight, who possessed a small farm on the banks of Charles River, in the town of Dover and State of Massachusetts, about sixteen miles distant from Boston, kept a little flock composed of fifteen ewes and one ram. In the year 1791, one of the ewes produced a lamb of singular appearance. By the advice of some of his neighbors, he killed his former ram, and reserved the young one for breeding. The first season, two lambs only were reared in his likeness. In the following years, a number more, distinguished by the same peculiarities. Hence proceeded a strongly marked variety in this species of animals, before unknown to the world. It has been called by the name of the *Otter breed*.

This name was given from a real or imaginary

resemblance to that animal, in the shortness of the legs and length of the back; by some supposed to have been caused by an unnatural intercourse; by others, perhaps as fancifully, from fright during gestation. It is only certain, that others were then sometimes seen on the banks of this river. They have since disappeared.

The person, who was the first to dissect one of these sheep for the purpose of ascertaining the properties and qualities which distinguish them from our common breed, has added the appropriate term of ANCON.

The singularity of form seems to be confirmed in the blood. Experiments, in crossing, have changed the strain, or, if I may be allowed so to express it, amalgamated the qualities of this with those of other breeds, so as to produce a mixed or mongrel race, in too few instances to form an exception to the theory.

When both parents are of the otter or ancon breed, the descendants inherit their peculiar appearance and proportions of form. I have heard of but one questionable case of a contrary nature.

The small number of cases where the young are said to partake in part, but not altogether, the characteristics of this breed, will not invalidate the general conclusions, established on experience in breeding from a male and female of distinct kinds.

When an ancon ewe is impregnated by a common ram, the increase resembles wholly either the ewe or the ram.

The increase of a common ewe, impregnated by an ancon ram, follows entirely the one or the other, without blending any of the distinguishing and essential peculiarities of both.

The most obvious difference between the young of this and other breeds, consists in the shortness of the legs of the former, which combined with debility or defect of organization, often makes them cripples in maturer age.

Frequent instances have happened where common ewes have had twins by ancon rams, when one exhibited the complete marks and features of the ewe, the other of the ram. The contrast has been rendered singularly striking when one short-legged and one long-legged lamb, produced at a birth, have been seen sucking the dam at the same time.

The facts respecting the fleeces have not been so well ascertained. They have been judged by some to be finer and heavier than those of our common breed; by others, of a medium fineness, but possessing more uniformity of pile on the same, and on different sheep of this kind. I have seen instances of their varying considerably from each other.

One case, where the young assumed the perfect likeness of the ewe, together with a meliorated pile, apparently derived from the ram, is too interesting to be omitted. The enclosed specimen of wool, No. 1, is from an ancon Merino: That is to say, the offspring of an ancon ewe and Merino ram. Its shape is the very image of the former: its wool, which covers almost the whole face, and extends quite down to the fetlocks, of a pretty fine quality (a common sign of the best blooded Merinos) partakes of the silky feel and felting quality of the latter; with, I judge, about the same portion of fineness as the fleeces, which my quarter-blooded Merinos ordinarily carry. The locks, No. 2 3 and 4 were clipped from a wether, ram

and ewe descended immediately from ancon parents on both sides. The fleece of the former weighed four pounds and a half; those of the two latter somewhat rising three pounds each.

The ancons have been observed to keep together, separating themselves from the rest of the flock, when put into enclosures with other sheep. The lambs are remarked to be less capable of standing up to suck without assistance, when first yeaned, than others. Although they arrive somewhat later at maturity, the sheep are said to live as long as those of our common breeds; unless in some cases, where by reason of their debility and decrepitude, their health is impaired and their lives shortened.

To whatever cause this may be attributed, whether arising from defect in vertebrae, muscle, joint, or limb, it is certain they can neither run nor jump like other sheep. They are more infirm in their organic construction, as well as more awkward in their gait, having their fore-legs always crooked, and their feet turned inwards when they walk. According to some information, the rams are commonly more deformed than the ewes.

Sprung from an individual, remarkable for what might be called a caprice of nature, it is not one of the least extraordinary circumstances, that this misshapen and feeble race should propagate their own deformity and decrepitude until these characteristics have become constitutional and hereditary. It may be asked with reason, why such a breed should have been continued? The expectation of advantage, particularly in one way, doubtless prevailed over slighter considerations. We cannot boast of being such neat farmers, or of being so much attached to fine shapes in animals, as the more skilful graziers and breeders in Europe; consequently the prospect of gain in some useful quality, or even of exemption from inconvenience, would more readily recompense us for the want of beauty, or reconcile us to the sight of what, to more acute or fastidious spectators, might be considered its opposite. The unfavorable appearance of Merinos, according to the generally received ideas of handsome proportions in sheep, is understood to have operated considerably in retarding their spread in France and England, as well as in a smaller degree in the United States of America.

The breed of ancons was expected to be a valuable acquisition, on account of their being less able than others to get over fences.

In New England, beyond which they have rarely migrated, there are few commons, no hedges, no shepherds, no dogs whose business it is to watch flocks. The small freehold estates are enclosed by fences of wood or stone. These are frequently too low to prevent active sheep from breaking out of pastures, into meadows or grounds under cultivation. Crops are injured, farmers discouraged. Hopes were entertained that this evil would be remedied. It has been in part.

To countervail this advantage, the drovers have complained of the great difficulty of driving these cripples to market; and the butchers, that the carcass is smaller and less saleable, than that of our common breeds. Perhaps, it is commonly not so fat. I have perceived little difference in the taste of the mutton; and presume, if served at table in equal condition, it would hardly be distinguished by better judges. They have been remarked not to fatten so easily, possibly owing to

less facility or industry in gathering food, or to some fault in the organic system.

Since the introduction of Merinos, which are equally gregarious, quiet, and orderly, probably better feeders, and with greater disposition to take fat, and more highly recommended by their fleeces, the ancon breed seems in danger of becoming almost extinct. They have so much declined, that for many months, it was not an easy matter for me to procure one for dissection in Boston. That operation was performed by the ingenious Dr. Shattuck, who makes the following remarks. "The sheep weighed just before it was killed, forty-five pounds. The most obvious difference in its skeleton from the skeleton of the common sheep, so far as any superficial observation has extended, consists in the greater looseness of the articulations, the diminished size of the bones; but more especially in the crookedness of its fore-legs, which causes them to appear like elbows, while the animal is walking. I have taken the liberty to call them *ancon*, from the Greek word which signifies elbow. On dissecting the sheep, I could not forbear noticing the flabby condition of the subscapular muscles; this may partially account for the great feebleness of the animal, and its consequent quietude in pastures."

This skeleton will be presented to the President of the Royal Society, by the gentleman who is so obliging as to charge himself with the delivery of this letter.

I have been the more particular in the statement, because I deemed it important the point should be settled, so far as evidence can be adduced, that the preservation of different breeds, once clearly designated, in whatever manner obtained, whether from casualty, as in the present instance, or from calculation and cultivation, as in that of the new Leicester breed, depends more on some inherent quality in the blood, than in climate, food, or any other circumstance. Although it is allowed that these have no inconsiderable influence, particularly the first, on the fleece, in the torrid zone. In all temperate regions and even in higher latitudes, where extreme cold prevails, flocks may be improved by care, or deteriorated by the want of it.

The settlement of this point would not fail to have a tendency to eradicate the remains of the pernicious prejudice, that the Merinos of Spain cannot be bred out of that country, without degenerating and losing their essential character for wool.

The beneficent Creator having ordained "that all creatures shall increase after their kind," has still left much for man to do, in regard to those which are made more immediately subservient to his use.

We are not ignorant how much the agricultural nations of Europe and America are indebted for meliorations in their husbandry to modern researches and discoveries in chemistry, natural history, and other branches of philosophy; as well as to experiments of eminent farmers, and especially breeders of cattle.

My experience has been too limited for me to flatter myself with being able to add to the stock of materials for investigation and improvement, except by becoming in some degree the medium of communication between the agriculturists of the two continents.

I have formerly exerted myself to enable my

countrymen to improve their breeds of useful animals, perhaps not altogether without success. My present object should rather be, to supply facilities and inducements for abler men, possessed of better opportunities, to discover and disclose the best means for selecting and spreading the most approved breed of fine woolled sheep, by which Merinos are meant, throughout the different countries which are known to be well adapted to their cultivation.

So tempting a motive for contributing my mite to the repertory of a society, justly celebrated for the extension of human knowledge and improvements, and which has done me the honor to enrol my name in their number, was not to be resisted; and the less, as it affords me occasion of presenting, at the same time, the homage of high respect for their President, with which I have the honor to be,

Sir, your most obedient servant,
D. HUMPHREYS.

A FINE COW.

We find the following account of a remarkable cow, in the report of the Committee on Cows for Windsor County, Vt., and which we copy from the *Woodstock Mercury*. We have seen some very fine Suffolk Pigs sent here by Mr. LOVERING, but did not know that he could beat almost any of us with his cows as well as pigs.

John L. Lovering, of Hartford, presented a native cow, for which we awarded him the first premium. We think this to be a very rare cow, and deserving of more than a passing notice. She is of good size, fine form, and is ten years old last spring. Mr. Lovering has put her upon repeated and thorough trials, and very carefully noted the results, and they will compare very favorably with any statements of the kind which have ever come under our notice. The cow was milked, and the milk weighed by an indifferent person, and the committee were furnished with a statement of the weight of the milk each night and morning, for ten days in June, from the 14th to the 23d inclusive. The aggregate was 516 pounds—ranging from 51 to 53 pounds per day. The milk for the last four days was made into butter, and after being worked dry and hard as it could be made, weighed ten pounds and five ounces, or 18 pounds per week. From the 1st to the 10th of September, she gave 294 pounds of milk, "while running in a pasture in which the water had all dried up, and the grass nearly so." In ten days in June, 1848, she gave 490 pounds; the same time in 1849, 501 pounds, and made 10 pounds of butter in four days; and in ten days in September, the same year, 399 1-2 pounds of milk. She has had only the common keeping of Vermont stock—hay and corn-fodder in winter, and common pasture with other cattle in summer; and no other feed during the year, except, for about two weeks before being turned to grass, she had a shovel full of cut feed (containing about 2 quarts of meal) once a day. Her owner says she will give milk all the year if he chooses.

Of all the fine cows which "have put themselves upon the record" within the past few years as great milkers, we know of none which equals this one of Mr. Lovering's for a yield of milk, and the yield of butter has very rarely been exceeded. Mr.

L. says he "knows nothing of the pedigree of his cow, but intends to of her descendants." He has two heifers from her, which he considers of great promise; and from his well-known care and skill in such matters, we may expect to hear a good account of those "descendants" hereafter.

CROSBY MILLER, for Committee.

WHAT THE APPLE-MAN SAID.

A friend called upon us just now, clad in his linsey-woolsey frock and stout boots, and with a face all beaming with gladness, bid us a cheerful "good-morning, sir."

Editor.—Take a chair, sir.

Friend.—Can't stop but a moment. I came in with a load of apples, but thought I would just say good-morning to you.

E.—What are apples worth now?

F.—O, they vary in price as they vary in quality—\$2,50, \$3,00 and \$3,25 a barrel. But mine were all engaged last fall. I shall sell \$700,00 worth from my orchard of last fall crop.

E.—Well, friend M., that is a handsome income from one item of the farm. You have been a successful cultivator in all your crops, I believe, and are qualified to speak of most farm operations. Judging from the observations you have made, what do you suppose the farmer can do, now, the best to promote his interests?

F.—Well, I should say give his attention to fruit and take the *Agricultural journals*; you have no idea how farmers are imposed upon in fruits and in grafting and budding; but then it is their own fault—if they would read the agricultural journals more, they would soon know how to do these things themselves, and then might snap their fingers at the itinerant budders and grafters!

The editor laid down his pen, very wisely rubbed his right eye, and said—"them's our sent'ments 'xactly."

DRAINING IN INDIANA.—Gov. Wright, in his address before the Wayne County Agricultural Society, estimates the amount of marshy lands in Indiana at three million acres. These were generally avoided by early settlers as being comparatively worthless, but when drained they become eminently fertile. He says, "I know a farm of 160 acres that was sold five years ago for \$500, that by an expenditure of less than \$200, in draining and ditching, the present owner refuses now \$3,000." Again he says, "I have a neighbor who informed me that in 1850, a very dry season, he had ditched a field that he previously put in corn; in the low and wet parts of the field he usually gathered in the fall a few nubbins, but went to the high ground for his crop. In the fall of last year, he obtained his best corn from the low land, his worst from the high; and the extra crop of the year paid for the whole expense of ditching."—*Albany Cultivator*.

✚ In character, manners and style, the supreme excellence is simplicity.

For the New England Farmer.

TREATMENT OF SICKLY PLANTS.

BY WM. J. A. BRADFORD.

MESSERS. EDITORS:—I do not remember to have seen in any papers of our country an account of a discovery which is here related, made in France some years ago, which consists of a very simple treatment by which plants affected with weakness or languishment are restored to vigor and health. The diseased conditions to which this remedy has been applied in France are described as debility, etiolation or bleaching, chlorosis (*chlorose*), yellow gum, (*ictère*), languishment, (*phthisie*), emaciation or withering, (*consomption*.)

It has been the usual course in this country, and, before the discovery referred to, it was also the practice in France, to depend on a particular mode of cultivation to remedy the evils mentioned such as adapting the vegetable to the nature of the soil, tempering and amending the soil, and supplying the most suitable manures.

The remedy and the mode of applying it is described in the following lines. The article used is called by the inventor, in his description, soluble salts of iron, (*les sels de fer solubles*), and is variously named sulfate de fer, sulphate of iron, and, as synonymous with it, vitriol vert, couperose vert, (green vitriol, green copperas.) This can be no other than what is known with us as copperas, or sulphate of iron.

Dr. Darwin, in his *Philosophy of Agriculture*, published in 1800, suggests that green vitriol might be found to be a remedy for the gum secretion in trees, though I do not know that it has been tried until the recent experiments made as herein related.

In 1840, a scientific farmer in France, guided, as he says, by some points of resemblance which he had observed between the coloring principle of the blood, and the coloring principle of vegetables, administered copperas (*sulfate de fer*) to some hortensias affected to a high degree with the diseased condition referred to. The singular results obtained, led him to repeat his first trials, to vary them, and to apply them to plants of different families. At the end of autumn he was convinced, and to satisfy others he proceeded to follow out his experiments in 1841, with equal success, under the eyes of some friends.

In 1843, the agricultural committee of the arrondissement of Chatillon appointed a committee to follow out the experiments, and the report was so favorable that a gold medal was awarded to the discoverer.

Copperas was applied by several farmers of Chatillon to artificial meadows, as a substitute for plaster. The spring being very wet, favored the action of the salt, and the success of the experiment led the same persons to repeat it in 1844. This year was very dry. The consequence was the salt was not immediately dissolved; it was converted into an insoluble oxide of iron, and of course was not absorbed by the growing crop. The result was nothing.

This liability to oxydation, unless previously dissolved in water, or immediately melted by rains, is a great inconvenience attending its use in extended cultivation; and even under favorable conditions it is not recommended on fields of leguminous crops, nor to well grown cereals, unless the

soil is almost entirely destitute of iron, which is not often the case.

But there are circumstances, says the discoverer, in which green copperas (*vitriol vert*) employed with discretion will produce important results. M. Dumont in 1845 applied it to part of a field of sickly winter wheat, which very soon became distinguishable at considerable distance, by the intensity of its color; and gave a product quintuple of that of parts of the same field left to themselves.

The action of copperas (*sels de fer*) upon the chromule is of such sensibility that letters or designs traced on a pale leaf with a pen dipped in a solution of it, very soon restore a fine green to the diseased leaf.

If the leaf is glaucous (*glaucque*) that is, if it has become dry, says the inventor, absorption cannot take place. It will, of course, in that case, be useless to apply the solution to the leaf by sprinkling, and it will be necessary to have recourse to watering the roots in a dose of 150 grains (8 or 10 grammes) to a quart of water. Frequently, he says, it is best both to sprinkle and to water.

But the usual method of application directed is, to sprinkle the diseased grain, if it can be done, with copperas water, (*eau ferre*), made with one pound avoirdupois of sulphate of iron (*sulfate de fer*) to about 50 gallons of water, to be applied on a cloudy and warm day. It is said that it will have no effect if the thermometer is below 55°, and to repeat it in 8 or 10 days, if necessary. It should be used immediately when the copperas is dissolved.

If water is not at hand the copperas, (*vitriol vert*), may be pounded and mixed, at the moment of using, with a dry, finely-powdered soil, and scattered among the grain at the rate of 40 pounds to the acre; and repeated, if necessary, in a week or fortnight.

The application of this remedy is much more easy on tree and garden than field culture. On this scale, it has been practised at Chatillon and in the Jardin des Plantes, Paris, with remarkable results. It was first applied to the roots, but since 1844 by sprinkling the leaves with a weak solution of 15 to 30 grains (1 or two grammes) to a quart.

W. J. A. B.

HARD WATER.

What waters are pure—From whence natural hard water is produced—The cause—The philosophy of cleansing—Its effects—Error in the use of lime—its benefits and virtues.

None of the waters produced by nature are entirely pure and soft—artificially distilled water alone is so, and often then, without care and some chemical knowledge of the process, it is not free from impurities.

The waters from primitive formations, particularly from mountainous districts, are almost pure, and springs and wells on sandy plains are nearly—owing to the rocks and soils being wholly composed of silicious and other constituents, insoluble in water. All streams and springs in secondary, or limestone countries, contain more or less materials constituting what are called *hard water*—and often the waters from sudden showers, which have been produced by evaporation from extensive regions of like formation, are sensibly affected.

All waters known as hard, result from some of

the acids or their salts being held in solution. The most common are the carbonic acid and the carbonates, and sulphurous and chloric acids and their combinations. All the waters containing carbonic acid gas, and sulphuretted hydrogen, (the material that makes the sulphur springs of the country,) uncombined with the earths, are rendered soft by simple boiling, as the gases are expanded by heat and thrown off, and no deposit is left—but when united with lime, alumina (clay) or the metals, boiling deposits a portion by releasing the solvent, in the form of a hard stoney concretion.

The process used by washing-women, to *cleanse* the hard water by adding lye, ashes, or potash, is a strictly correct chemical process. Acids, and alkalies are antagonistical principles; one destroys or neutralizes the other, and renders both inert and harmless. The sulphuretted waters are more difficult to cleanse, or purify, than any other class except the muriates (acid of common salt, now called chlorates,) as they adhere to their combinations with greater tenacity.

The effects produced on hard water in washing, where soap is used, is very simple when investigated. Soap is a compound of an alkali and animal fat, or vegetable oils and resins, and when added to water containing any acid, or acidulated substance, the acid, by its chemical affinities, seizes and neutralizes the alkali of the soap, disengaging the fatty substance in the same shape it was originally, and in the worst possible shape for cleansing the person or clothing.

There is a vulgar error prevailing among the people generally, that it is dangerous to add lime to wells and cisterns, on account of its rendering the water *hard*. There is no greater fallacy among our traditionary belief. Lime is strictly an alkaline substance, and as such, is a neutralizer of all the acids that water contains, and may be freely used when in a *quick* or unslacked state—old and airslacked is hurtful, as it has become a sub-carbonate. One ounce of fresh quick lime, dissolved in water, will soften two barrels of ordinary hard water, and render fit for washing purposes. It is also advantageously used to sweeten cistern water when it becomes stagnant, and of bad odor, and the cheapest and most ready deodorizer of all unpleasant, unhealthy effluvia.—*Rural New-Yorker*.

For the New England Farmer.

DANVERS WINTER SWEET APPLE.

BY J. F. HYDE.

MR. EDITOR:—In your paper of the 7th Feb., I noticed an article on the "History of the apple tree," by your valuable correspondent, S. P. Fowler, Esq., of Danvers, in which he speaks of the variety known as *Danvers Winter Sweet*. Now I would not have the hardihood to contradict a statement made by a gentleman of his standing and ability; but my experience in growing this variety will not allow me to agree with him in saying that it is one of the finest varieties, or that it is profitable to raise for market. On the contrary, when I picked my apples last fall, I was compelled to own—notwithstanding I had recommended it to others—that it was not a good kind to raise. In fact, I almost made up my mind to graft them over next spring with something better. I will now give my objections: In the first place, the apples on the trees are all sizes, from very

small to about medium, then nine-tenths of them are more or less covered with dark rusty specks, which so much disfigure them as to render them almost unsalable.

The above are my principal objections. I have no reason to find fault on the score of productiveness, for it is a constant though not a great bearer. My trees are well taken care of, and are on good ground, good for most kinds of apples, but perhaps not for this; one tree stands in a deep, black loam, with a clayey subsoil, quite moist; while others are on higher and dryer land, where is found a deep yellow loam, with a subsoil of gravelly loam. In both these situations the apples are very imperfect; if the variety grows well with others I say *tres bien*, I am glad of it, it will show that it is either the fault of my soil, or my own fault in not taking proper care of the trees. I will here state that I am quite positive, in fact, I *know* that I have the *true* kind, for I have exhibited it at the rooms of the Mass. Horticultural Society a number of years in succession, and it has been pronounced *right*; no one has ever doubted, nor can they. I well know that I am speaking against an apple that has been recommended by Pomological Conventions and Horticultural Societies, at different times and places, but I can't help that; what I have stated above are facts, and if they tend to injure the reputation of this variety, it is all right, for we don't want a kind that has the *name* of being good and is not; we want the "game as well as the name." I have written this partly for the purpose of drawing out the opinions of others in regard to this apple. Perhaps it does well in its native town, and may be in other places. I hope we may hear from others in respect to it.

Yours, &c.,

J. F. H.

Newton Centre, Feb. 16, 1852.

SUCCESS IN FARMING—ITS SECRET.—Universal success in agriculture often dooms the favored man to the envy of his fellows. It has even called down upon him the wrathful superstitions of a whole neighborhood. The great diffusion of light and knowledge, however, is dispelling the horror of "book" or scientific farming.

Pliny gives a case among the Romans, where Cresinus was cited before the people to answer to a charge of sorcery founded upon the fact of his gathering greater crops than his neighbors from a small spot of ground. In answer, Cresinus produced his efficient and superior instruments, his well fed oxen, and a hale young woman. Pointing to them, he exclaimed—"There, Romans, are my instruments of witchcraft; but I cannot here show you my labors, sweats, and anxious cares." Reader, skill and energy are the witches that now bring success to the husbandman.—*Rural New-Yorker*.

HOW TO CATCH A SHEEP.—In catching sheep never seize them by the wool on the back, as it hurts them exceedingly, and has, in some cases, been known to kill them, particularly in hot weather, if they are large and fat. Indeed, the best way is to avoid the wool altogether, and to accustom yourself to take them by the hind leg, or, what is still better, by the neck, placing one hand under the jaw, and the other at the back of the ears; by lifting up the head, a child may hold almost any sheep.

PREVENTION OF CRIB-BITING.

This is a habit to which some horses are subject, and sometimes becomes so injurious to the animal as to constitute "legal unsoundness." A remedy has been discovered by Sir Peter Laurie, of London, which the *Illustrated News* says is simple and efficient, and which is represented in the above engraving. The animal seizes violently the manger or some other fixture with his teeth, arching his neck, and sucking in a quantity of air with a peculiar noise. This habit is most frequent in young horses, or such as are highly fed or underworked, and curious enough, appears to be contagious, as one confirmed crib-biter will inoculate others with the practice, if allowed to associate. Muzzles, neck-straps, and several ingenious contrivances, have been used, with but little success. Sir Peter's remedy simply consists in preventing the animal from seizing the manger or any other object while tied up in the stable, by boarding over the space between the bottom of the hay-rack and the outer edge of the manger, forming a steep inclined plain. Portions of the boards can be partially removed to enable the horse to eat at stated times. This simple precaution is said by the most eminent authorities to be perfectly effectual in the prevention or cure of crib-biting.

SOUND DOCTRINES.—We hope to receive many letters containing the doctrines expressed in the extract of a letter which we give below:—

Many persons object to an agricultural paper that is published far from home. But this I con-

sider a whimsical error. The true principles of good farming are the same in California and Nova Scotia. Many of the crops may be different and some of the details, but the general principles are the same; and in my estimation farmers should patronize those papers most ably conducted, though they were published a thousand miles off, in preference to the more trashy affairs, because cheap and published near at home. J. D. BURDITT.

Norwalk, Huron Co., Ohio.

For the New England Farmer.

INQUIRY.

DEAR SIR:—I should be pleased to know through the *Farmer*, the best kind of early peas, and the best mode or practice of raising them. Whether to sow broadcast or plant in hills. The object is to raise and sell them green in the pod, to considerable amount. Yours, &c., G. L. O.

Watertown, Ct., Feb. 15, 1852.

REMARKS.—On referring to Mr. EVERETT, the accomplished seedsman in the establishment of Messrs. Ruggles, Nourse, Mason, & Co., he informs us that the *Early Kent* is the best pea for early cultivation. Gentlemen whom he supplied last spring informed him that they got fine crops about the middle of June. They are thickly sowed in drills, three feet apart, and require no sticks.

FROST AND FRUIT.—A distinguished pomologist at Cincinnati, in writing us, says.—

Our peaches are mostly frozen. Other fruits, such as apples, pears, plums cherries and such hardy fruits, are all safe, and I doubt not we shall have an abundant crop. A. H. E.

Feb. 13, 1852.

THE GOLD PLACERS OF NEW ENGLAND.

Lumps of virgin gold are said to have been found, on the mountains of Vermont. However that may be, it is undoubtedly true, that every man has a gold mine, or its equivalent, in his farm, if he be so happy as to own one. He has that upon his own acres, which he can change into gold, at his pleasure; and with much more ease and certainty, than the California miner can change his dust into coin at the mint.

Let us look a moment, at the fact, that these places really exist, and at some of their advantages, over the California placers, that are turning the heads of so many of our Yankee boys.

According to the last census, there are in the State of Maine 46,760 farms; which, divided by the number of acres in the State, would give about 480 acres to each farm. In New Jersey, the average of each farm is about 172 acres. This probably is a fair basis upon which to calculate the number of farms in the other five New England States. Taking this basis it would give 108,761 farms for the rest of New England—or 155,521 for the whole, including Maine. We will call it 150,000, to keep within bounds. Now suppose that each farmer on an average has five acres of his farm under tillage. The average produce of corn per acre in Massachusetts, New Hampshire and Vermont, is about forty bushels, and the value about eighty cents per bushel. The number of acres under tillage, then, in New England, is 750,000 and the annual crop of these acres is thirty million bushels of corn, or its equivalent in agricultural productions. The value of this is *twenty-four millions of dollars*, every year dug up out of the soil by the farmer's hoe. The net profits of corn per acre, in the three States above mentioned, is about *eighteen dollars*. This would give a clear profit to New England farmers, on crops raised by the hoe, of *thirteen and a half millions of dollars*. And this is but a single item, in the wealth of our placers. Does California turn out any better! If Congress ever finds time to print the census of 1850, and give us the facts, we shall be able to give with some accuracy the whole product of our mines.

But this is only the beginning of their wealth. The mines of New England are not half wrought. If, with their present husbandry, each acre averages forty bushels of corn per acre, then with the help of science, each acre may be made to produce *eighty bushels per acre*; and that too with no large outlay of capital or labor. This may seem an extravagant calculation; but we have the facts to back up the position. In the *New England Farmer*, Vol. 2, page 42, it is stated that "R. W. Turner, of Newton Centre, raised from one acre and one hundred forty-four rods of land, four hundred and twenty-four heaping bushels of ears." This is over one hundred bushels to the acre. In

the Patent Office Report for 1849-'50, pages 236-7, Arthur Rice, of Conway, Mass., states of his own experience in corn growing—"We live in a hilly country, and but a small portion of the land is suitable for tillage. I have on my farm about twenty acres fit for tillage. Till the last twenty years about thirty-five bushels of corn was considered an average crop per acre, for this land. Now it is at least *seventy-five bushels*. The produce of the turf land,—that is, the first crop,—has been for several years, from sixty to seventy bushels per acre. The crop the second year has been from eighty to ninety bushels. In some cases, as has been reported by a committee of the Conway Agricultural and Mechanical Association, over *one hundred*—and in one instance as high as *one hundred and twenty-two bushels of shelled corn per acre*." He says also of the experience of others, "I subjoin a statement of the amount of corn per acre raised by several farmers in this town in 1846-'47, as reported by a committee. In 1846, 134—132—111—110—103—96—92 bushels per acre. In 1847, 122—120—110—103 bushels per acre."

Facts like these, are not unfrequently reported to the Patent Office, and if there were any well-prepared index to the Reports of that office, it would be an easy thing to spread them before our farmers through the agricultural journals. But to get at anything wanted, in that strange medley of facts, now, is very much like looking for a needle in a haystack. O, for some utilitarian Yankee to have charge of that Report just for one year, to digest its contents and to give us an index in the Boston style of book-making! Would it not be refreshing!

There are probably instances known to almost every farmer, of an acre yielding eighty bushels of corn, and they are growing more common every year. Improved husbandry, upon the principles now advocated by our best agricultural journals, would easily make this the average yield in New England; and then we should have, as the annual product of our placers, sixty million bushels of corn and *forty-eight millions of dollars*, and a clear profit of *twenty-seven millions of dollars*. The gold is there in the soil, and all we have to do, is to dig it out.

We will now notice some of the many advantages in our New England mining over those of California.

New England mining is attended with comparatively *few hardships*. You have no long sea voyage, with its perilous sea-sickness—no exposure of health in tropical climates—no exposure of life and morals, among desperadoes and black-legs—no living in tents and subsisting upon the coarse fare of the mines. You may be all the while surrounded with the comforts and endearments of domestic life. You may live constantly in the smiles of the best of women, the mother of your children, and make home glad with your presence. Ah, what

aching hearts are there now, amid the wild sierras of that land of gold, pining to hear the loved voices, that make every New England home the abode of contentment and bliss. You have labor, indeed, upon these rugged acres, but it is not of that kind which despoils the body of its strength. It is the toil of Eden, blessing both the soil and its owner.

And this leads us to notice that the working of our placers *cultivates and invigorates the mind* much more than California mining. A little knowledge of geology and a little experience in the business are the chief mental qualities of the miner. The rest is mainly a business of brawn and muscle. Scientific husbandry is one of the best fields of mental culture. It trenches more or less upon every field of science, and taxes every faculty of the intellect. Geology, Botany, Chemistry and every branch of Natural Philosophy have a bearing upon the farmer's work. It cultivates the memory, the reason and the taste, to grow such articles as shall meet our numerous wants. For it is as much our privilege as it was Adam's to grow things "pleasant to the sight" as well as those "good for food." Horticulture and gardening—beautiful trees and fair flowers are legitimate objects of interest to the husbandman. They ought to be a part of every New Englander's rural home.

Then there is this additional advantage, that the man who mines the soil for bread, instead of gold, gains at once the ends, which the adventurer proposes as the object of his toils. The thousands who have gone to the shores of the Pacific are seeking, mainly, a happy home. This is the end of their toils. They mean to amass wealth and return to the well-ordered and peaceful homes of the East. They want a home and its comforts—good neighbors, good society, and good privileges for their rising families. All these, any industrious farmer may have, in almost any corner of New England. All that the miner gets, beyond a happy home, will not be likely to add much to his happiness. Money or a fortune has very little to do with human happiness. The desires must be controlled so that they shall not constantly stretch away after riches beyond a competency.

Mining for bread is the most *certain* business a man can follow for a livelihood, while mining for gold is the most *uncertain*. Nine farmers out of ten, probably, succeed in business and gain a competency. Their failures are generally owing to speculations out of their line of business. In mining for gold, probably nine out of ten fail. A large per cent. die on the passage to or from the mines—more lose their health amid the imprudence and hardships of a new mode of life—and the great majority never get gold enough to cover their expenses, and pay for their time. Is it wise, then,

to forsake these good old acres of New England, on a perilous and uncertain adventure, to the Eldorado of the Pacific?

Then, last and best, our Placers are *inexhaustible*. It may be, the gulches and cayotes of California will never give out; but, if so, they will prove the first gold mines of this character. However that may be, our placers will always yield bread, and will yield it, in increasing abundance, as they are wrought. Every rock is a store-house of food, for man and beast, wisely locked up by Almighty power, against the too prodigal use by man. Our granite soils are rich in the food of plants. The potash that enters so largely into all trees, fruits and grains, is there in great abundance. It only needs science to unlock the store-house, and teach us its economical use. New England, instead of being so large a market for the flour, the corn, beef and pork of the West, may feed her own population, and thrice its present number, with perfect ease. Let California then take care of her gold. We have richer mines at home. Ho! for the golden placers of New England. Who will work them?

For the New England Farmer.

RACES AND VARIETIES OF ANIMALS.

BY JOSIAH STEVENS.

MR. BROWN:—A writer in a late *N. E. Farmer*, under the foregoing caption, in alluding to a new variety of sheep, referred to in the communication of Col. David Humphrey, to the Philosophical Society of London, in 1811, and called by him the "Otter or Ancon Breed," puts forth the following interrogatory. "Are there races of sheep of the form and description here given, now existing in New England?"

In answer, I would say, that upon the farm of the late Col. JOHN HEAD, of Hooksett, N. H., there is a flock of sheep of about twelve in number, answering in every respect the description given by Col. Humphrey—of their origin I have no information.

I have often tried (but without success) to purchase them, for the reason that they can neither run nor jump. The present owner, NATHANIEL HEAD, gives them the name of Creepers. J. S.

Monument Hill, Concord, N. H., March 1, 1852.

P. S. I learn by a member of the family that they were informed by those from whom they were obtained that they were of the "Otter Breed."

J. S.

HOW TO JUDGE CATTLE.—In all domestic animals, the skin, or hide, forms one of the best means by which to estimate their fattening properties. In the sandling of oxen, if the hide be found soft and silky to the touch, it affords a proof of tendency to take meat. A beast having a perfect touch, will have a thick, loose skin, floating, as it were, on a layer of soft fat, yielding to the slightest pressure, and springing back towards the finger like a piece of soft leather. Such a skin will be usually covered with an abundance of soft, glossy hair,

feeling like a bed of moss—and hence is ever termed a mossy skin. But a thick-set, hard, short hair, always handles hard, and indicates a hard feeder.

For the New England Farmer.

CRANBERRY CULTURE.

Mr. BROWN:—Seeing several communications in the *Farmer*, on the cultivation of the cranberry, I thought I would venture a few observations. It is generally observed that in cranberry meadows, the fruit is grown on isolated plats, some of them fruiting alternate years, some bearing every year, and others always barren. The question arises, what are the causes of this variation. It is a noticeable fact, that the plants generally grow in plats of a rod square, and less. How did these originate? I think that they came from the seed. In passing over a meadow one will notice a difference in the foliage almost as striking as in the foliage of the strawberry plants. The fruit will differ as much in form, as a pine, from an alpine strawberry. In the flavor and amount of acidity there is a wide difference. A plant will bear fruit in three or four years from the seed, and continue bearing for several years. After that it will become old, large, and barren.

It does not root from its runners unless they become covered with earth, or the scum that floats upon the water; as the water (in the summer) settles away it falls upon the plants and keeps them moist, which causes them to root. They will strike root as readily as the quince, if layered in upland. In meadows where there is no scum to form new runners, they grow several feet long with no roots except the parent, or seedling roots, the main stem grows large, and the plant barren. Is this barrenness caused by a deficit of roots to sustain an overgrown top, or is it old age? I think it is not old age, for by setting them in moist upland, and layering in the tops, or runners, they will root readily and fruit. A layer will strike a handsome set of roots in three weeks, over two inches in length. That the cranberry can be cultivated on upland is beyond a doubt. Why is it that so many have not succeeded? I think the greatest trouble was in setting poor plants, and not giving them sufficient moisture. Mr. Cole, in his *Fruit Book*, estimates that in the State of Maine more than 2,000,000 of varieties of the apple have been produced; of that vast number few have been found worthy of cultivation. May not as small a proportion of the cranberry plants growing wild be worthy of even a trial?

We all know the disadvantage that one would labor under if he should set a bed of strawberry plants gathered from the fields and meadows; he would see fine plants but no fruit. Does not the cranberry planter labor under the same disadvantage? But the strawberry planter has the benefit of the amateur's experiment, whose productions are vastly superior to those not domesticated. Is there not as good a field for the amateur's skill in ameliorating, and domesticating the cranberry to garden culture?

If they commence with the seed, is there reason to doubt that they would be improved as much as the strawberry which appears in the height of perfection, compared to what it was a few years ago.

Yours,

A SUBSCRIBER.

For the New England Farmer.

COWS—CARROTS—WHEAT.

I notice a communication in your last number, in regard to feeding carrots to milk cows, which confirms my own observation on the subject. And now wish to inquire if you, or any of your correspondents, have had any experience in feeding them to young cattle (3 and 4 year olds) that are being fed for market, and if so, what has been the result? Their is an opinion prevalent here, among some cattle growers, that they possess no fattening properties and think they are hurtful.

H. S. Morse, of Shelburne, Vt., (who has the past summer, in company with S. W. Jewett, of Weybridge, imported some French Merino Sheep) this past season raised from four acres of land, 198 bushels of winter wheat. Can that be beat?

Yours truly,

EDWIN STANTON.

Painesville, Vt., Feb. 14, 1852.

REMARKS.—We hope some of our experienced friends, perhaps Mr. BROOKS, of Princeton, will answer the question in relation to feeding carrots, [or any other roots] to young stock. We doubt whether California can beat the yield of wheat mentioned, without smuggling some of their *ten pound* potatoes into the measure. We are glad to notice all about us a new interest in the cultivation of this important crop.

The article in another part of this number, headed "*Intellectual and Rural Delights*," and the remarks which it has called forth by our associate, Mr. HOLBROOK, will be found worthy of an attentive perusal—especially by young men engaged in the business of cultivating the earth. A sort of discontent, and sometimes, we fear, a contempt for the noble and manly employment of husbandry, has found its way into the minds of too many. They are dazzled, we suspect, by the clinking coin of some returned Californian, or some dashing shop-keeper, out of the thousands who embarked with them.

Farm work requires a capital in coin, in talents and ability, and in muscle and sinew, as well as in merchandizing or navigating the ships of commerce. And when this capital is invested, farm work is no more a labor of drudgery than any other—it is not half so much so. The lawyer is tied to his terms, and the merchant to his counter; the physician to his never-ceasing horse-mill rounds, the clergyman to his parish, and the mechanic to his bench. But the farmer breathes the free winds of heaven on his hills, and drinks from the crystal springs that flow through his valleys. The first beams of the morning sun touch his brow amid the waving grain of his garnished fields, while he bathes his feet in the cool dews that have gathered upon the bending grass. He reclines at noon in the shade of his old trees, and walks among his springing corn, or profits by the cheerful criticisms of his wife and children upon his garden culture, as they stroll about among the plants he is rearing. He goes to

mill or to market at will,—attends the county fair in autumn with his fat oxen, lusty steers, or mammoth vegetables; takes a premium on orchards, bog meadows, or corn and cabbages, while his wife bears off the palm for making the best butter, and his unmarried daughter, under eighteen, receives the silver goblet for the best loaf of wheaten bread. He finds a day to look in upon the General Court, or perchance is a constituent part of that honorable body himself. He is the best man to conduct the town business, for a referee, for a juror, or for any other honorable calling.

If this be drudgery, what shall we call the confinement of the law office and court-room, or the judge's bench? what the dull routine of the merchant's duties behind the counter, with his daily liability to protested notes and bankruptcy? What the daily task of the mechanic, happy if released after a ten-hour's toil, or operators in the cotton mill, summoned by bell and encased in codes of regulations! No—it is not the employment of the fields that is drudgery—it is the man's mind that is enslaved. It does not spring from the sod, buoyant with life and intelligence, searching and inquiring into the wonderful operations above, beneath, and around him. Let him turn his thoughts to chemistry in its relations to his employment, and he will soon become convinced that no man has yet lived long enough to understand the strange yet beautiful operations constantly carried on in his trees, plants, flowers and animals.

While cultivating his fields, he is in the school-room of nature, and it is his own fault if he do not study her ways and make her subserve his purposes. She calls to him from her mountains and valleys and streams, from the air that cools his heated brow and the dust beneath his feet. She pleads eloquently for his attention through the birds of the air and the beasts of the field, in the change of the seasons, in showers, sunshine, frost and vapor. Is there no voice in these, to him who cuts the grain or fells the forest? Are these all a sealed book to thee because thou art a tiller of the soil? If so, awaken to their perpetual call, be led to a consideration of the delights which are hourly offered to thy mind, and rejoice in gratitude that thou art permitted to be free upon the acres which thou art gladdening by thy care.

There must be labor and care on the farm; and there is toil, confinement and anxiety in every other pursuit. "Hardly do we guess aright at things that are upon earth; and with labor do we find the things that are before us."

SOWING SEED.—Farmers, as well as other people, like to make good bargains, and we like to have them, especially when they buy a year's paper of us, and pay for it in advance. But that is not the bargain we are going to write about. It is the sowing of grass seed. If you would make a good bargain with mother earth, give her a plenty

of seed. If you scrip her, you cheat yourself and cheat your earth, and are guilty of double dishonesty. If you undertake to save five dollars in seed, you will lose twenty dollars in hay and pasture. Be wise, then, and sow bountifully, and you shall gather bountifully, and make a good bargain.—*Vermont State Journal.*

For the New England Farmer.

POTATO ROT.

MR. EDITOR:—Much has been said and written on the subject of the potato rot, and the subject seems to have been exhausted long before this, but like the evils of intemperance, something new almost daily occurs. I do not expect to write a very learned article on the subject, as I have never written much for the press, but all farmers have had some experience in the cultivation of that indispensable article of food, the potato. Some writers have attempted to point out the cause of the rot while others have prescribed a cure. No one as yet, I think, has ascertained the whole cause, or has recommended a sure remedy. We have often seen it stated that charcoal would prevent the decay, but recently other writers say that charcoal is one cause of the rot. This I believe is true. Last season I planted potatoes on a piece of land which I burnt over and cleared in the spring, and those places where there was the greatest amount of charcoal and ashes, the potatoes decayed the most.

One writer recommends to keep the potato plant from the warm south wind. I think he is correct in his views on the subject, and while we would protect them from the warm south wind, I would have them freely exposed to the cool breezes of the north. In 1850 I had a potato patch so situated that a small grove almost entirely prevented the north and northeast wind from reaching it, that decayed badly, while a few rods from it, on my neighbor's land, on the same kind of soil, but a little higher up, the potatoes did not rot at all. We find it necessary in Vermont to have our wheat sowed on high land, where it will be much exposed to the wind, in order to secure a good crop, and in cool dry seasons the potato rot has not prevailed to any great extent. J. Dow.

East Corinth, Vt., Jan., 1852.

REMARKS.—We think our correspondent must be mistaken when he says that "recently other writers say that charcoal is one cause of the rot." It is *not* the charcoal, but the carbonic acid given out while burning the wood upon the ground. Charcoal spread upon the soil in small quantities, has never been supposed to encourage the potato rot.

NORFOLK TRANSACTIONS.—We are indebted to the President of the Society, Hon. M. P. WILDER, for a copy of the *Transactions of the Norfolk County Agricultural Society*, for 1851. It contains the address of Mr. RUSSELL, most of which we have already transferred to our columns, and of which we have already spoken as highly as we know how to speak. The reports, statements, &c., are full and well-drawn, and the whole printed in the best style of the art.

For the New England Farmer.

DOMESTIC POULTRY—BANTAMS.

MR. EDITOR:—The many different kinds of bantams, if they cannot compete with some of the other varieties of domestic fowl in profit alone, certainly can in point of beauty, and to the student of nature they will always be an object of admiration.

The bantam has long been noted for the great bravery and pugnacity he exhibits even when matched with a cock of much greater size and natural advantages. I have seen one engage day after day, with the same enemy, and after numerous battles he would show the same ardor to fight with his old adversary, who had been repeatedly his victor, that he did at first. These fowls are even more profitable than they are credited for; it costs less than half as much to keep them than it does the common fowl, and they deposit quite a number of eggs in the course of a year.

The hens are deservedly noted for their motherly kindness to their young, and perseverance in sitting; in fact, I think it almost cruel not to allow them to sit, even if you could break them, which I could never do in any humane manner. Of the many varieties, perhaps the following are the most worthy of attention.

The *Seabright*, has long been considered as the type of his fraternity. They are divided into two classes, viz: The gold and silver pencilled. Of the former, a model cock should be of a brilliant brownish orange color, with each feather tipped or margined with black, a rose comb well pointed behind, and with legs and bill of a dull bluish color is also indispensable. His weight should not exceed one pound. The hen should correspond in all particulars. The silver pencilled are of the same size, shape, form, &c., and are only distinguishable by the ground color, which should be of a silvery white instead of orange.

The *Black Bantam* "is a most beautiful example of a great soul in a little body;" it is even more pugnacious, jealous, and domineering, in proportion to its size, than the thorough bred game cock himself. The cock should have a full rose comb, clear and sinewy legs, glossy plumage, proud gait and air, with a flowing tail, and should not exceed twenty ounces in weight. The hen is quite inferior in general appearance, although she has quite a trim and womanly manner.

The common *White Bantam*, although inferior to either of the former, is a fowl of importance; it is usually feathered to the toes, and presents rather a junky appearance. Many other both useful and beautiful varieties of this fowl might be described here, but this article has become much longer than I at first intended, and I fear I ought almost to apologize for it.

Brooklyn, Feb. 27, 1852.

POULTRY AND EGGS.—I do a small business in raising and putting up garden seeds, and last fall, a year ago, as I was clearing out some red pepper seeds in my back yard, I threw the shucks and chaff promiscuously about. I soon observed my hens picking them up and swallowing them with great avidity. They soon commenced laying eggs, though they had laid none for a month before. I fed them regularly, two or three times a week, since then, with red pepper, and they have never

yet stopped laying, summer or winter, spring or fall, except while they were hatching their chickens; and I am confident, from more than a year's experience, that, by this method, hens may be made to lay the year round.—*Dollar Newspaper*.

WINTER BIRDS.

The Portland Advertiser states that several species of birds, rarely met with in that vicinity, have appeared there this winter: among others the "great American shrike, or butcher bird," the "pine grosbeak," and the "lesser red poll linnet." The *grosbeaks* are about the size of the robin—the male being of a rich crimson and slate color, the females slate and dull yellow. The *linnets* are little smaller than the chirping sparrow—the males having a bright cap of crimson, and breasts of rich pink color, while the female and young have none of the pink color.

The Beverly Citizen says:

We are fearful that the extreme cold weather of the past months, and the great quantity of snow that has fallen upon the earth, may have been fatal to many of our resident birds. Among those which are most common, are, besides the snow-buntings, that most commonly appear in flocks, the great and little speckled Woodpeckers, the Chickadee, or Black-capt Titmouse, and the Canada Sparrow.

We have not lately heard the lively voice of the chickadee, nor the scream of the speckled woodpecker, each of which were quite common in the early part of the present season. They may have been driven to other territories; and they may have perished. The chickadee, though one of the smallest of our birds, is capable of enduring a very great degree of cold, and is one of the most useful of the feathered tribe. This little bird lives almost entirely upon insects and their larvæ, and is indefatigable in his labors to obtain them; constantly exploring every branch of every tree, winding round them in all directions, and devouring every insect and grub that exists on the surface. The speckled woodpecker follows him, with his strong bill; he does more than merely to glean his repast from the surface, he bores into the wood and bark of the trees, and drags out the mischievous grub from his hiding place.

BOOKS.

THE COMPLETE FARMER AND GARDENER. SAXTON: N. Y.—This work was written and compiled by THOMAS G. FESSENDEN, Esq., one of the most distinguished agricultural writers that New England has ever had.

THE FAMILY KITCHEN GARDENER. By ROBERT BUIST, author of two or three works on Floriculture, and a practical gardener. SAXTON: N. Y.

With these two books before him, with a careful reference to their contents, and such inquiry and observation as every one can make, any man may take a farm or a garden and get along with it tolerably well so far as a knowledge of the time of sowing, planting, harvesting, preparation of the soil, &c., are concerned; and to those of experience, they will serve as important helps in many respects. They are both written by men "who

practised what they preached," and on whose teachings we may rely with undoubting confidence. The books are printed and bound in the neatest manner, illustrated by numerous engravings. And what is still more valuable, both are accompanied by correct and comprehensive indices. You are not obliged to waste time in hunting through the volume for a particular subject, but turn to it at once on looking at the index.

We find pleasure in speaking of these works, and in calling attention to the agricultural publications of Mr. SAXTON. It is doubtful whether any publisher of agricultural books will find an immediate return of his outlay—and as the books are really what are needed, we look upon him somewhat as a public benefactor. We have examined his works which relate to the farm with interest and care, and do not think of one but has the stamp of sterling merit. A multiplication of these works will multiply the profits of the farm and garden.

WALKS AND TALKS OF AN AMERICAN FARMER IN ENGLAND: By F. L. OLMSTEAD, a Farmer of Long Island, N. Y.—This is one of PUTNAM'S Semi-Monthly publications for travellers and the fireside, and an admirable book it is. Mr. Olmstead, with a brother and a friend, strapped on their knapsacks and took a ramble of several months among the farmers of England, saw the cottagers in their rural homes, conversed with them, and their wives and children, ate at their tables, and slept in their thatch-covered attics. There is no grumbling or fault-finding in the book. The writer found hospitality and friends everywhere, or if he did not, he has had the good sense not to mar his interesting pages with dolorous complaints. The book is written without the slightest effort to appear learned, in a pleasant, attractive, common sense way, and thus will come home to the heart of every person of common sense who reads it.

The author has seasoned his rural narrative most judiciously, with brief descriptions of some of the old castles, parks, halls, furniture, &c. It is a delightful book every way; and this opinion will appear to the reader an honest one, when he is informed that it was *purchased* with a "quarter" from our own pocket, a part of the profits from a last year's crop of eggs and potatoes! If we find ourself upon Long Island again, we shall be strongly tempted to turn aside and hold a further chat with the good-natured author of *Walks and Talks in England*. We have only room now for an extract or two.

It may be proper for me here to record my observation of the general disposition of the English people towards our nation, which I confess I did not find to be exactly what I had anticipated, and which I think must be generally much misconceived in the United States.

There is a certain class of the English, conserv-

ative Whigs more than Tories, as I met them, that look upon the United States people as a nation of vulgar, blustering, impertinent, rowdy radicals; very much as a certain set with us look upon the young mechanics and butcher-boys of the town—troublesome, dangerous, and very "low," but who are necessary to put out fires, and whose votes are of value at elections, and whom it therefore *pays* to make some occasional show of respect to, and it is best to keep on civil terms with. A considerable number of snobbish, pretending, awkwardly positioned, sub-aristocratic, super-sensible people, that swear by the *Times*, and have taken their cue from Trollope, follow in their wake. But the great mass of the educated classes regard us very differently; not with unqualified respect and unalloyed admiration, but much as we of the Atlantic States regard California—a wild, dare-devil, younger brother, with some most dangerous and reprehensible habits, and some most noble qualities, a capital fellow, in fact, if he would but have done sowing his wild oats.

Altogether, considering the exceedingly queer company English travellers seem usually to keep when in the United States, and the atrocious caricatures in which, with few exceptions, they have represented our manners and customs to their countrymen, I was surprised at the general respect and the degree of correct appreciation of us that I commonly found. There is no country not covered by a British flag in the world, that the British of 1850 have anything like the degree of sympathy with, and affection for, that they have for the United States.

THE COTTAGE AND FARM BEE-KEEPER. By a Country Curate. SAXTON, N. Y.—This is an admirable book every way—text, illustrations, paper, type and binding. Those who desire information on the subject had better obtain it. It is sold, beautiful as it is, at the low price of fifty cents. We have marked passages to transfer to our columns, and shall allude to it again.

"AN ESSAY ON MANURES," and "THE ELEMENTS OF AGRICULTURE," two small books in pamphlet form, both prepared with great care and printed handsomely, are also issued by SAXTON. Sold at 25 cents each; so cheap that they may be purchased by all, and will prove of great service to those who are seeking a better course of cultivation.

LARGE CORN FIELDS.

A statement is published in some of the Ohio papers that J. Davis, of Ross county, in that State, cultivates 1800 acres of Indian corn, and that he has this winter, "a corn crib filled, which is three miles long, ten feet high and six feet wide!"

The corn crib part of the above story is pretty tough, but in the number of acres cultivated Mr. Davis is beaten by a farmer in North Carolina, who cultivates 3500 acres of land, and makes an average annual crop of corn, (unless in bad seasons, or loss by flood or accident,) of *one hundred and fifty thousand bushels!* *The Plow*, a new agricultural monthly, published in New York, vouches for the truth of the above statement, and

says that the crop is cultivated mostly with the plow—dispensing almost entirely with hilling, and using the hoe as little as possible. The corn is all shelled by horse power machinery, but the proprietor has it in serious consideration to use steam.

But even this large corn field is beaten by that of H. L. Ellsworth, formerly Commissioner of Patents, and now of Indiana. He cultivates twelve thousand acres of corn. Just imagine a corn field ten times as large as the territory on which Boston proper is located!

For the New England Farmer.

WHAT BIRD IS THAT?

FRIEND BROWN:—I received your note, describing a new bird which has appeared on your farm, and which you accuse of destroying the blossom buds of your apple trees, an offence which I should be tempted to punish *capitally*, although I have never shot a single bird on my farm since I occupied it, and suffer the crows to sit daily on my *tall pine* within reach of my rifle, unharmed. I am willing to pay the birds for their society and music, in almost any kind of grain, and feel that there is a balance due them still, for relieving my fields of myriads of worms and insects, which make up their *animal* diet. But when it comes to “making game” of my fruit buds, I am not prepared to agree to their proposition.

The bird you describe is the Pine Grosbeak, or Bullfinch, described by Nuttall as follows:

“The wings with two white bands and the tail black, secondaries edged with white; length about 9 inches. *Adult male* tinged with reddish orange, beneath inclined more to yellow, above varied with blackish brown. In the *young male* the same parts and the rump are carmine of different shades, except the flanks, abdomen and vent, which are cinereous. *Female*, with the top of the head and rump brownish orange, below cinereous, with a faint tinge of orange.”

This bird is confined almost exclusively to the arctic regions, and appears in the Northern States of the Union, only in very severe winters. They probably have *come south to warm themselves* this winter in our genial climate, where they find the thermometer only 20° below zero!

They feed principally upon berries and upon the buds of trees. In my collection of stuffed birds, I have two specimens, which I procured at Chester, N. H., in the winter of 1836-7.

I find in my catalogue, a memorandum showing that these birds were very abundant during that winter; and that I could not learn that they had ever been seen before. At that time they appeared very tame, and feasted themselves upon the berries of the mountain-ash close by the house. I have never seen any but *young* birds, of the species.

They look about the size of the robin, of a rather shorter and more *chubby* form, and have a short, thick bill. I should think gentlemen interested in Ornithology would be glad to avail themselves of the aid of yourself and your man James to procure specimens of a bird so rare and beautiful.

My collection, by the way, which comprises about a hundred specimens, and which I picked up from time to time about fifteen or eighteen years ago, are in almost as perfect preservation as when first procured. I say this by way of encouragement to any of your readers, who may feel an

interest in this most fascinating branch of study. Any country boy of common ingenuity, may obtain at very little cost of money, a collection of native birds, which will constitute one of the most beautiful and useful ornaments for *his home* that can be imagined. A taste for the subject as a *science* would soon lead to an accurate knowledge of the habits of birds, and prevent their wanton destruction.

Yours truly,
HENRY F. FRENCH.

THE FOREST TREE.

BY ELIZA COOK.

Up with your heads, ye sylvan lords,
Wave proudly in the breeze,
For our cradle bands and coffin boards
Must come from the forest trees.

We bless you for your summer shade,
When our weak limbs fall and tire;
Our thanks are due for your winter aid,
When we pile the bright log fire.

O! where would be our rule on the seas,
And the fame of the sailor band,
Were it not for the oak and cloud-crowned pine
That sprung on the quiet land?

When the ribs and the mast of the good ship live
And weather the gale with ease,
Take his glass from the tar who will no give
A health to the forest trees.

Ye lend to life its earliest joy,
And wait on its latest page;
In the circling hoop for the rosy boy,
And the easy chair for age.

The old man totters on his way,
With footsteps short and slow,
But without the stick for his help and stay,
Not a yard's length could he go.

The hazel twig in the stripling's hand,
Hath magic power to please;
And the trusty staff and slender wand
Are plucked from the forest trees.

For the New England Farmer.

ONIONS.

MR. EDITOR:—I wish for a little information on the subject of raising onions. I tried some two or three years, and have utterly failed; the immediate cause is maggots, which attack the roots about the time they begin to bottom. If you can give the desired information through the columns of your valuable paper, you will confer a favor on at least one subscriber.

Jan. 24, 1852.

R.

REMARKS.—There should be no difficulty in raising, generally, a plentiful crop of onions. They require a friable, loamy, rich and deep soil, not a sandy, or a clayey one. After a crop has been taken off the onion tops should be dug in with plenty of well-rotted manure. In the spring cover the bed liberally with ashes and dig it in, then roll the ground with a moderate pressure and sow the seed. If under this treatment you do not get a good crop of onions, friend “R.,” it will be from some other cause than the want of good cultivation. You must then look to see if there are not shade trees too near or that the onion patch is in some way deprived of the full influences of the sun.

AN HOUR AT MR. SHELDON'S FARM.

Mr. *Sheldon* having attained some celebrity as a cattle breeder, and having a desire to look at some heifers in his barn, we passed an hour or two with him on Friday, on his premises. We found a herd of some forty or fifty neat cattle, including calves, of the native and mixed breeds of Devon, Durham and Ayrshire. Some of them were very fine. His piggery is extensive, and contained beautiful litters of crosses of the Suffolk and Middlesex, and some very fine breeding animals. But in passing over the farm we felt more disposed to give him credit for the extent and beauty of his orcharding than for his stock. He has about twelve acres set with apple trees, making one thousand in all, that are not only a credit to his skill as a cultivator, but will soon repay him for his outlay. The trees having been judiciously trimmed, have flatly spreading tops, and their straight, smooth trunks, show no marks of carelessness in plowing the ground. He pointed out an orchard where an attempt had been made with trees taken from the same nursery, and transplanted at the same time his were, not one of which had attained a height of six feet, or borne an apple, while some of his are three inches in diameter and have produced several bushels to a tree. So much for culture.

For the New England Farmer.

EXTENSION OF FORESTS.

BY MORRELL ALLEN.

MR. EDITOR:—It is not yet two hundred years since most of the territory of Massachusetts was covered with a dense forest. Within the memory of some of the present generation all the improvements on farms which attracted much notice or occasioned many remarks, were the clearance of portions of forest and the preparation of the soil for cultivated crops. It is not, therefore, very wonderful that many farmers hear, with surprise, recommendations to plant forest trees, or that they should inquire, why urge us back into the woods, when we have but lately made our escape from them? This inquiry is certainly a very natural one in view of the recent settlement of the country; but when the present condition of our soils is considered, it will appear that no more important improvements can be suggested to many of our farmers than the contraction of cultivated fields and the extension of forests. In every section of the State we see wide tracts of land which have been cropped with different kinds of grain till they will no longer yield a compensation for the labor bestowed. The renovation of these exhausted lands in a course of cultivation with the present resources of farmers is impracticable; if they could employ the requisite number of laborers, they would often fail of obtaining the necessary quantity of vegetable matter to re-invigorate their fields. Eager to reap the fruits of virgin soils, we have extended our cleared fields beyond our powers of right management. The fields are now demanding compensation for the fruits they have so liberally yielded in past time; those fruits we have dispersed into different parts of the world, and do

not now possess the means of direct payment of the debt. We can do it gradually, as heavy demands on a community are lessened by sinking funds. Plant forest trees, and with every year of growth they will be scattering substances which have been taken away in cropping; ultimately the fields will be restored to nearly pristine richness; if posterity should need them for cultivation, they would find in them two valuable prizes, one in wood and timber, and the other in soil of sufficient energy to yield abundant crops. This may seem to some farmers a work requiring too much time; and they may feel disposed to inquire if there be not some shorter way of renovating soils? There certainly is, and we earnestly recommend the mixture of soils and the manufacture of manure to the extent of every farmer's power. But when this is done a large breadth of surface must be left untouched. Reduce the fields of cultivation, but not in the least the quantity of labor or manure bestowed. In several of the counties if the farmers would reduce the quantity of land now called cultivated, to one-half the present extent, with the same amount of labor and manure they would reap far greater products. Some may suppose the planting of trees is work for the exclusive benefit of posterity; it is not so; the attention of the writer was directed to this subject rather late in life, but has for several years been using fuel of his own raising. Since 1833 a number of old fields have been planted with different kinds of forest trees, and several of them have been advanced in value by the operation, not less than 150 per cent. We have satisfactory and strong evidence that this subject demands the attention and experiments of our farmers, that their labors in this direction will promote personal prosperity and conduce in a high degree to the welfare of posterity. M. A. *Pembroke, Feb. 24, 1852.*

REMARKS.—The subject matter of the article is worthy of careful consideration. It discusses the whole matter in the briefest manner, and gives the remedy for the evil. Extend your forests and manure your cultivated lands more highly. We hope to hear from the writer again.

For the New England Farmer.

FARM SCHOOLS.

MR. EDITOR:—Quite an interest has been taken in the last few years on the subject of agricultural education in connection with farm schools. All this shows that the right spirit is among our farmers in regard to educating themselves, and more particularly their sons, both in practical and scientific agriculture. In a late number of the *Farmer*, there is a very good article on a "Model Farm School," by Mr. French. Probably there are many other gentlemen in your State, each of whom might suggest a good plan for a "Farm School." But we think that the greatest difficulty will be found in bringing down these plans to a practical operation. In fact, to know just how to manage, and *who* can manage such an institution successfully, is the great question to be settled. There are many men, I doubt not, in any State, who might think themselves just "the man" to manage such a school. But in all faith we must say, that we do not know where the *first man* can be found in this country to manage such a school. But then

if this be the case, must we sit still and do nothing!—by no means, a beginning must be made. On thought, we are much inclined to the opinion of some other men on this subject—men, too, who have given the subject a good deal of study. And they say that they place very little confidence in what the State may do in founding an agricultural college with an experimental farm attached. They had much rather depend on private enterprise and means, where the institution could be kept free from the influences of politicians or any set of men who would do more to cumber its progress and give a few heavy salaries to professors and assistants, for a small amount of labor performed. We are inclined to think with others, that if we succeed at all in this business we must commence in a small way at first, with a few students, on an economical plan. Everything about the school and farm should be made as systematic as possible. Should an institution or college of this kind be heavily endowed from the State, and then through want of the right kind of management go down in a few years, such a shock would be given to the cause that it would not recover again in the next twenty-five years. We are not of the opinion that the importation of *foreign teachers* would be of much consequence to our schools, to any great extent. The truth is, the man must be made and manufactured on the spot, and there is plenty of material to work on, if it can be only formed into the right shape. And another thing is, the friends of agriculture must not expect too much from an institution of this kind. It must take some time before a school of this kind can show to the community around any great results from its operations. After all the talk in the States and Legislatures on this subject, there is not one of them that knew just exactly what they want, for the good reason that not any of them has had the practical knowledge necessary to know what to want. But then a beginning must be made, and where there is a will to do, there will be a way provided. All talk and no action, is not the practical thing to carry it out. But action, and energy, and interest, must all be combined together, to carry this matter forward to success. And if the friends of this *scheme* will act, we shall see something yet.

Yours truly, L. DURAND.

Derby, Conn., Feb. 25, 1852.

TO CORRESPONDENTS.

An excellent communication from "S.," dated Feb. 8, was mislaid, (not forgotten) and consequently no reference made to it. We thank friend "S." for the interest he manifests for us, and are confident he will appreciate our motives in placing his communication on file, for future use or reference. His communications on other topics will be gladly received.

G. F. F., *Grantham, N. H.*—Make your current bushes bear well by selecting the right kinds first—not the common red or white, but what are called the Red Dutch or White Dutch. Give them a good deep, rich soil, keep the weeds and grass away, and you will have no cause of complaint for want of crop. Do not allow the bush to produce suckers, or to grow into a thick clump and get covered with moss; nor propagate by suckers.

Some persons prefer training the bushes into the form of trees. They look neatly in this way, but require considerable watching and care, and will scarcely produce so large a crop as you will get from the bushes—but the fruit will be larger. All superfluous wood should be cut out late in the autumn. A change of bushes once in five or six years is also advisable.

THE ORCHARD CATERPILLAR.

BY LEVI BARTLETT, ESQ.

In the *Farmer* of the 14th inst., I notice an article on the orchard caterpillar, by H. of Bedford. His history of the spring caterpillars which feed upon the apple and cherry tree—or rather upon the leaves of those trees—is quite correct. They are a very different insect from the summer, or web caterpillars, that have become so abundant within a few years past. The elm, ash, cherry, and many other kinds of trees, besides the apple, were disfigured by their large webs the past season. The eggs from which the spring or early caterpillars are hatched, are deposited by a miller or moth "transformed from the caterpillar." The eggs are placed around the limbs and twigs, forming a kind of ring or bracelet; this ring consists of three or four hundred eggs, in the form of short cylinders, standing on their ends, close together, and covered with a thick coat of brown varnish. They remain in a dormant state from the time they are deposited by the winged moth in July or August, till about the time of the unfolding of the apple and cherry leaf in the latter part of April or beginning of May. They continue in the caterpillar state about seven weeks. Their habits, ravages, and the unsightly appearance of their nests, are so generally understood, that nothing further need be said upon these points. Many of the eggs can be removed from the lower limbs of the trees by searching for them in the winter or early spring. Those that escape and hatch out, should be destroyed soon as the nests are seen. For this purpose a spiral brush is the most effective instrument I have ever used for ridding my trees of these "useless intruders." A mullein head tied to a pole answers as a substitute for the brush; its rough surface readily winds up the silky nests with its occupants, and they are easily crushed.

Going over an orchard two or three times in this way with the brush, will rid it of the spring caterpillar. The summer, or web caterpillars, are hatched from eggs laid by the parent moth, (a winged insect,) in a cluster upon a leaf near the extremity of a limb. They are hatched from the last of June till the middle of August, some broods being earlier, and others later. The young caterpillars immediately begin to provide a shelter for themselves by covering the upper side of the leaf with a web, which is the result of the united labors of the whole brood. As they increase in size, they enlarge the web. Thus they go on increasing the size of the web, and devouring only the upper skin and pulpy portion of the leaf, leaving the veins and lower skin of the leaf untouched. Toward the end of August and during the month of September, they leave the trees and disperse, wandering about till they find suitable places for shelter and concealment. Here they wind their cocoons and remain through the winter. In the

months of June and July they are transformed into moths. These moths are white and without spots; their fore thighs are tawny yellow, their feet blackish. Their wings expand about one and a quarter inch. The only time we can attempt to exterminate these destructive insects with any prospect of success, is when they are young and first beginning to form their webs on the trees. So soon, then, as the webs appear on the extremities of the branches, they should be cut or stripped off and be crushed under foot. The cabbage butterfly, the black squash bug, and many other insects, deposit their eggs upon the under side of the leaf, similar to the parent of the caterpillar above described.—*Granite Farmer.*

EIGHTH AGRICULTURAL MEETING,

AT THE STATE HOUSE, MARCH 9, 1852.

SUBJECT FOR DISCUSSION—*The Cultivation and Preservation of Fruit.*

The meeting last Tuesday evening was not so fully attended as some of the previous ones, on account of the unfavorable state of the weather. Hon. Mr. WILDER was prevented from being present to preside by indisposition, and Hon. R. B. HUBBARD, of Sunderland, was called to the chair. He said that as he did not know until this evening that he was to preside, he had made no special preparation to speak upon the subject. The subject, he said, was one in which he felt, in common with all who are interested in agriculture, a deep interest. So closely allied to agriculture is the culture of fruit, that the condition of the latter may generally be regarded as a good index of the condition of the former. Wherever we find fruit culture well attended, we expect to find agriculture also receiving a good share of attention. There are many reasons why fruit culture should receive the attention not only of the Agriculturist and Horticulturist, but of the whole community. The first of these reasons is, that an abundance of good fruit is promotive of health. To be convinced of this we need but remember that Providence has provided an abundance of fruit for every month and season of the year; all medical men testify that ripe fruit in its season, in proper quantities, is conducive to health; another reason why fruit should be cultivated extensively is its effects upon morals. Some might smile at this idea, but he believed the connection was most intimate. Why was it, he asked, that there is such a lax opinion in regard to the purloining of fruit, when all the other products of the farm are guarded with so much care. In the eyes of the law the person who steals fruit is guilty of stealing, but public opinion regards it more lightly. Why is there this distinction? The only reason he could give, was that good fruit is so scarce, and this scarcity is urged as an excuse for these depredations. Make these fruits—these good fruits—as plenty as corn, and it would be held as sacred in the public estimation.

Mr. HUBBARD said he regarded our climate as

well adapted to the cultivation of fruit as that of any State in the Union. He doubted whether any climate was better than that of Massachusetts for fruit culture. Other climates will produce fruits which ours will not; but we can produce as large and valuable a variety as any other part of the globe. He mentioned the apple as one of the most valuable of our fruits. The pear grows as well here as any where else. There may be difficulty in starting the trees, but when underway, they do well. Peaches are more difficult to raise, still these difficulties are not insurmountable; they can be produced in every county in the State. They need only proper care and protection. Cherries, quinces and grapes, and many other delicious fruits, can be raised in every garden in the State. This subject is interesting, he said, not to the farmer only, but to all classes who have a plot of ground big enough to give root to a fruit tree. Hence the importance of having the subject more fully understood, and hence also the need of agricultural education; for to cultivate fruit successfully, more knowledge is needed than to pursue the ordinary duties of the farm. Few of our farmers are well informed upon this subject; and they will never be informed upon it, until some different measures are taken to instruct them. Every boy should be instructed in the operations of the cultivation of fruit, as much as in the rules of arithmetic and geography.

Mr. BUCKMINSTER said we have not enough fruit. Prices are much higher than they were twenty years ago; twenty-five years ago good apples could be bought for 75 cents a barrel, since then the price has been rising, and this, he said shows that we do not raise enough. He thought our latitude the best of any for the cultivation of the best of fruit. The currant, strawberry and cranberry, he said, could be well cultivated here, but go either north or south three degrees, and these fruits are not so good. We get richer peaches here, than they do south. There is no difficulty in raising them on the high grounds in the vicinity of Boston. He thought Lord Coke made a mistake, when he said that taking an apple from a tree was not theft, because it was a part of the real estate, and real estate cannot be stolen. One error of farmers, he said, was setting trees too deep; another was, in setting them in grass ground—which should never be done. The tree should not stand on a hollow place, where the water will stand about it; trees on side hills do best. The ground should be well cultivated, and kept well cultivated, while the trees are young. Fruit can be obtained from the Baldwin in four years from the bud, by proper culture.

Mr. POMEROY, from Southampton, spoke of his experience in raising fruit. He believed that we can raise some of the choicest fruit in our State. In order to get good fruit we must have good trees.

He believed it to be neither humanity or economy to deprive a fruit tree of the nourishment which it needs. Peaches with him had been the most profitable crop—the crop had never failed. His first trees he got from New Jersey, but he found them to be no better, if as good, as those he could get here. He fenced in a piece of land as a henery, and set out his trees there, and found they would grow about twice as fast as those outside the henery, and the fruit was much better. He plows the henery in the spring, and the fowls keep it light the rest of the season. The object in having the trees in the henery was to allow fowls to destroy the borer and curculio. The "President" peach he considered his best peach. He has to shorten his trees in, every year, they grow so fast. By shortening in trees which bore a late and inferior fruit, he had got a good fruit, and in good season. Apples do not do so well in his section, except early apples. The Legislature was providing a law against stealing fruit, which he hoped would remedy the evil to which the president alluded.

Maj. WHEELER, of Framingham, thought the fruit culture to be the most important and profitable of any. Instead of diminishing, the prices have been increasing the past thirty years. We do not raise half enough for our own consumption. We live in one of the very best climates to raise fruit. When we see that we do not raise enough for our own consumption, and that new markets are constantly opening, there is no fear of over supplying the demand. He contended that peaches might be sent to England and sold at enormous prices. Apples can be sent to the East Indies. We have much soil that is calculated for peaches, and we can raise them with more surety than they can at the South. They are not so liable here to be cut off by the late frosts in the spring. There are farms in Framingham where the peach has not failed for thirty years—while on others they fail three times in four years. They should be set upon high ground. He had examined many trees since the recent cold weather, and found that the buds were destroyed. Still he thought there was enough left to give us a good crop. He recommended cutting in every year—and then picking off a large proportion of the fruit, so as to raise that which is of a superior character. It is important to raise the best fruit—and it will always bring the largest price. The pear has been much neglected. He thought it could be cultivated to advantage and profit.

Hon. JOHN C. GRAY, of Boston, agreed that it was not good policy to plant trees in grass-ground. He asked for information, what we are to do when our trees grow too fast. If the ground is kept up, the branches of the trees in a few years will meet. He thought when trees are ten or twelve years old, the ground may be put down to grass. Apple trees ought to be set 40 feet apart. He thought

the peach was an uncertain crop in our State; such was his experience. He found it necessary to put out a dozen or two young trees a year in order to keep his crop full. The changes of our climate he thought to be the great source of failure of the peach crop. He agreed with others in the advantage of cutting in the trees. The old baking pears he thought to be hardy and easy of culture—the Iron pear and the Bartlett, for instance—while the Seckle and others were hard to raise. The pear tree he thought to be tender of drought; they are effected more by our long summer droughts than our cold winters. The apple he thought to be a standard fruit, and he was not aware of any better apple orchards in the world than the New England apple orchards. We have a climate which raises as many varieties of fruit as any climate in the temperate zone. The peach he considered a tolerably certain fruit on high grounds.

The CHAIRMAN inquired of Mr. Gray in regard to the treatment of the yellows.

Mr. GRAY considered the disease incurable, and advised getting the trees out of the way as soon as possible.

Maj. WHEELER recommended as a cure for the borer on peach trees, the application of a strong ley—say one pound of potash to four quarts of water. He believed with Mr. Gray that there is no cure for the yellows. One application of the ley in August he thought would be effectual for the borer.

Mr. BUCKMINSTER said there was a difference between the apple tree borer and the peach tree borer. Their habits are different. If the farmer places strong wood ashes around the roots of the peach tree in the spring it will prevent trouble from these insects.

Maj. WHEELER had tried ashes, lime and tan, and found them of no effect. The worms will go in above the ashes. He did not consider them a reliable preventive. He thought the wash would kill all the young ones and the eggs. The gentleman spoke further upon the culture of apples. There had been much neglect in setting out orchards. Soils, when they are set out, are not generally dug deep enough. The hole for apple trees never ought to be less than two feet deep and six feet across. Another trouble is that people do not get good trees. They ought not to be set out until four years from the bud. The nurserymen do not trim and shape the trees as they ought to, before they leave the nursery.

Mr. SHELDON, of Wilmington, said he should choose a sandy, loamy soil, where no water could stand, for his nursery. He would have the rows four or five feet apart. When the trees are small, it is a good plan to sift ashes over them in damp weather. When they are big enough to bud, it is a good plan to cover the ground with grass from a meadow; it will prevent damage from the

drought. One, two and three years are the best times to take them from the nursery. They should be taken up with a sharp spade. The tap root should be cut off before the tree is removed. They should be taken up early in the spring, and if the ground is not ready for them, cover the roots in ground until it is. They should be set out the same depth as they stand in the nursery. It is a good plan to sift soil from the corn field or garden among the roots. He also approved of washing trees with soap suds and ashes. In trimming, great care should be taken to balance the tree aright. He thought it needed a hard-hearted man to trim an orchard. A good tree set one year is worth a dollar; it will increase a dollar a year for the next nine years, and in the next twenty years it will pay the interest of that ten dollars and the principal also. Large limbs should be cut off in August. This is a better time than in June. He related an incident to illustrate that no man is too old to set out trees. To the nurseryman he would say, never cheat in the name of your trees, and to the farmer he would say, never set out an orchard until you are ready to take care of it.

It was then moved that the same subject be continued next week, and that the time of meeting be changed to half-past seven. Hon. MARSHALL P. WILDER, it is expected, will preside at the next meeting.

For the New England Farmer.

ONION MAGGOT.

MESSES. EDITORS:—Our onions were nearly all destroyed in this section last season by the *white maggot*, which I have seen mentioned in your periodical some years since.

I would inquire whether any remedy has been discovered to your knowledge that proves effectual.

Yours, &c., IRA BROWN.

New Haven, Feb. 19, 1852.

REMARKS.—See remarks upon another communication making similar inquiries. Use ashes and well-rotted manure freely, and we think you will get good onions.

A REMARKABLE HEN.—A gentleman of our acquaintance, in marketing a day or two since, bought from a wagon a hen of ordinary size and appearance, but the great weight of which excited his curiosity, and upon having it killed and cleaned, a remarkable fact was disclosed, and its extraordinary weight accounted for—the creature was found to contain *twenty-five eggs*, eighteen of which were of full size, with yolks and whites, although their shells were still soft; the remaining eight were of a yellow color, and varied in size from that of a hickory nut to that of a cherry. This remarkable bird was purchased in the Charleston market from Mr. Bradley, the keeper of the Four Mile House, near this city, and has been returned to his hands for the inspection of his customers and the curious in such matters.—*Charleston, S. C., News.*

GRAFTING WAX ON COTTON CLOTH.

To the Editor of the Whig and Courier.

Inquiries are frequently made for the best grafting wax and the recipe for making it. I have procured the recipe for the best article I have ever seen, which was three years since invented by Maj. Chapman of this city, which he uses in grafting in his nursery with good and almost sure success. I have used it two years and find it valuable; for it is very pliable, easily worked, and it contains nothing that in the least injures the scion or stock.

It should be made precise according to the following proportions.

RECIPE.

6 lbs. Beeswax; 1 lb. Rosin; 1 pint Linseed Oil. (No other oil than linseed should be used.) Melt them well together over a slow fire. Then with a paint brush, spread the wax thinly *wiffle* warm, on one side of thin but closely woven cotton cloth. Cut the cloth when waxed (lengthwise, as the warp is the strongest) into strips as may be wanted—say half an inch wide and about 9 inches long—according to the size of the stock to be grafted.

Grafting can be worked with these strips very readily, as no strings are necessary, and may be very neatly as well as quickly performed.

These wax strips may also be used in budding trees. That the public may be better accommodated I will try to keep a supply of the above grafting cloth in our store for those who do not wish to make it for their own use.

I would again remind our citizens that to insure success, all *stone* fruits should be grafted before the frost is out of the ground, or as early afterwards as possible.

Respectfully,

HENRY LITTLE.

COTTON FROM STRAW.—A circumstance extremely interesting to all engaged in textile manufactures, indeed to the whole community, has this week been communicated to us. An amateur chemist of this town, while engaged recently in testing the Chevalier Claussen's chemical process of making cotton, not having any flax straw at hand, tried it upon oat straw. To his astonishment, after the silica and gums which enter into the composition of oat straw in greater proportions than in flax, had been dissolved, he obtained a large quantity of good cotton. The opinion he formed from this and subsequent experiments is, that the common straws of this country may be profitably converted into cotton, thereby adding to the certainty and abundance of our future supplies. At any rate, the experiment is one which is worth testing to the fullest extent, and the hint here thrown out will no doubt induce persons most favorably situated for pursuing an investigation with advantage at once to undertake the task.—*Nottingham paper.*

EFFECTS OF IRRIGATION.—Water applied to the soil by irrigation gives many other things beside humidity; it manures, consolidates, deepens the staple, or surface mould, and guards against cold—effects as obvious in a northern, as in a southern climate.

Mr. Oliver Clark, of Southampton, killed some fowls recently, and found in the gizzard of one of them, two five-cent pieces. Biddy had perhaps become imbued with the money-getting spirit of the age.

For the New England Farmer.

ORIGIN OF WOODPECKER APPLES.

BY SILAS BROWN.

MESSENGERS. EDITORS:—I supposed the question in regard to the native place of the original tree which produced the Woodpecker or Baldwin apples, as they were called, had been laid at rest years ago; but latterly several towns have laid claim to the honor of growing the tree which has furnished New England with one of the best varieties of winter apples carried into market. Doct. John B. Brown, of Boston, (a native of Wilmington,) published a history of the tree and its location some 20 years ago, I believe in the *N. E. Farmer* of that day. In vol. 10, No. 22, of the *Boston Cultivator*, may be found an imperfect sketch of its history in answer to the claim of Tewksbury in a communication written by Doct. Rufus Kittridge, of Portsmouth. In vol. 7, No. 6 of the *N. E. Farmer*, Mr. Fowler says, "that it acquired this last name in consequence of its having originated on the farm of a Mr. Butters, situated in the town of Somerville, in the County of Middlesex." If Mr. Fowler had substituted Wilmington instead of Somerville, I believe all would have been correct, except the construction of the monument, which I never heard of before. The genuine Woodpecker apple is described by Mr. Cole as the late Baldwin; he says, "the late Baldwin is only a modification of the Baldwin, by what means is not known. It is a few weeks later, is much harder, is more flat, more of a crimson color." There is strong evidence that several varieties of apples have currency under the name of Baldwin apples; how it should happen that there should be late Baldwins, and early Baldwins, both originating from the same tree, is somewhat puzzling to my physiology.

Mr. Simeon Butters, a grandson of William Butters, the man that "planted the tree," is now 72 years old, and can remember when his grandfather died; he lives but a short distance from where the old Woodpecker tree flourished and died. I have taken such an interest for the honor of the two towns which produced the extraordinary tree as to send a "special messenger" to Mr. S. Butters, who is an intelligent man with undecayed intellects, for his certificate containing all the facts he was able to state in relation to the tree and its original proprietors. It appears that Woodhill, in Burlington, has the honor of raising and nursing the infant tree till it was large enough to transplant, then William Butters transplanted it on the Wilmington side of the boundary line about half a mile. I will here insert Mr. Butters' certificate:

"I, Simeon Butters, do hereby certify that my grandfather, William Butters, owned the original tree which produced the apples since known by the name of Woodpeckers, Baldwin apples and Butters apples; said tree was transplanted from Woodhill, at that time in Woburn, to the southwestern corner of Wilmington, very nigh the boundary line of the second parish in Woburn, since incorporated into the town of Burlington, and that the tree took its name from the woodpeckers, which were very fond of picking it. My grandfather died about 1783, a very aged man. The tree that produced the woodpeckers, I well remember; it has been done bearing about 30 years. My father, James Butters, has told me repeatedly, and told me not a year before he died, that Col. Baldwin got grafts from the Woodpecker tree on his farm. My father,

James Butters, died in his 97th year; my father had no knowledge of grafting, nor ever grafted a tree, as far as I knew. SIMMON BUTTERS."

It appears that S. Butters was 42 years old when the Woodpecker tree left off bearing; he was probably indebted to James Butters, his father, principally for the facts stated in his certificate, as his grandfather died when he was in his fifth year. He said his father was very much incensed at those who called his favorite apples "Baldwin apples," and put the question, why do you not call them Woodpeckers? He further stated that the original Woodpecker apples were very red, and much flatter than many of the apples called Baldwins now-a-days; and to use his own expression, shaped more like an English turnip. As we have depended in part on tradition in the above history, I think Mr. Butters' statement may be relied upon in every important particular. The time has gone by and it is too late to collect unrecorded occurrences and facts which took place the last century. S. B.

Wilmington, Feb. 27, 1852.

For the New England Farmer.

THE BALDWIN APPLE.

BY S. P. FOWLER.

MR. BROWN:—I noticed in your last paper some doubts raised by my friend P. in regard to the account I gave of the origin of the Baldwin apple tree. The information upon this subject was obtained from Downing's *Horticulturist* for the year 1847, in the following article, found on page 315, and entitled, "Account of the origin of the Baldwin Apple, by B. V. French, Vice President of the Mass. Hort. Society."

"This justly esteemed fruit originated in Wilmington, near Boston, in that part which now makes a portion of the new town of Somerville, in the county of Middlesex, Massachusetts. The original tree grew on the farm of a Mr. Butters, and was known for a time as the Butters apple. This tree was frequented and pecked by the woodpeckers, and Mr. Butters called it the Woodpecker apple, which was soon abbreviated to the Pecker apple. My trees, which I set out twenty-eight years since, are registered 'Peckers.' This fruit must have been known about a century. Orchards were propagated from Mr. Butters' tree, pretty freely, about seventy-five years since, by Dr. Jabez Brown, of Wilmington, and Col. Baldwin, of Woburn, and their sons, to whom the public are principally indebted for bringing the fruit so generally into notice. From Col. B. and his family, who introduced it largely into public notice, it took the name of 'Baldwin,' by which the fruit is now every where known. I am informed that Maj. Samuel Jaques, of Somerville, eminent as an agriculturist, breeder and horticulturist, as well as a public benefactor of his age, now owns that part of the farm on which the original Baldwin tree grew, and has placed a monument on the site where it once flourished."

Such is Mr. French's account of the origin of the Baldwin apple tree. We have always understood that the tree under consideration did not originate with Col. Baldwin, but was brought by him into notice, and it received his name. I find in the old fruit books, published thirty years since, it is called the Baldwin apple, or Pecker apple.—Probably something might be found in regard to the origin of this apple, in some of the volumes of the old *New England Farmer*.

Mr. Proctor says the Fall Harvey originated on the same farm with the Danvers Sweeting. In a conversation with the elder Mr. Manning, some years previous to his death, upon the subject of the origin of this fine apple, he said he thought it originated somewhere in Essex county, but he could not trace it to any particular town. We have always supposed that it might have originated in Danvers, from the fact of its having been known there during a period of nearly one hundred years. Mr. Manning says in his fruit book, it is without question the finest fall and early winter apple, a good bearer, and deserving extensive cultivation. Yours, &c.,

Danvers, Feb. 22.

S. P. FOWLER.

P.S. — I have ascertained since the above was written, that there must be some mistake in Mr. French's account of the origin of the Baldwin, which I copied from the *Horticulturist*. Mr. F. says it originated in Wilmington, near Boston, in that part which now makes a portion of the new town of Somerville. Now in point of fact, the town of Wilmington, in our maps of Massachusetts, is several miles distant from the town of Somerville.

For the New England Farmer.

FARM SCHOOLS.

BY JOHN GOLDSBURY.

MR. EDITOR:—I am a constant reader of your interesting and instructive paper. I have read, with much interest, all that has been said in it, upon the subject of *agricultural education*; and I have reflected much upon the different plans which have been proposed for promoting it. To all the plans which have hitherto been proposed, there are insuperable objections in my mind, if I except the plan recently proposed by Mr. H. F. French, of Exeter, N. H., which so nearly accords with my own views upon the subject, that I wish to be indulged with a few remarks upon it. Mr. French's plan of establishing a *model farm school*, located near a sufficient market, with suitable buildings, apparatus, stock, tools, and other appurtenances, to be tried as an experiment in one place, before similar schools are established in other parts of the commonwealth, appears to me to be less objectionable than any other plan with which I am acquainted. It certainly is a simple, practicable, and an economical plan; and I believe, if it were once thoroughly tried, it would prove to be a successful one. This is more than can be truly said of any other plan which has yet been suggested. All other plans appear to be complex, impracticable, and expensive.

Take, for instance, the two plans which now stand the most prominently before the public. One is, to establish in all our colleges, academies and high schools, an agricultural department for the instruction of the young in agriculture. The other is, to have this same instruction given in our common schools. Now, there is no person who is thoroughly acquainted with these different institutions, and knows what is going on in them, but he must see at once, that agriculture would not be successfully taught in either of them; in other words, it would not be successfully learned. So that, after the expenditure of vast sums of money, there would be an entire failure in the end.

This is true of the higher institutions for various reasons. Some of these I will mention:—

1. Because our young men go to college, not for the purpose of learning the science of agriculture, but to qualify themselves for some of the different professions.

2. Because the other college studies, duties and attractions, would take up so much of their time, as to leave them but little for agricultural pursuits.

3. Because none but the most wealthy farmers would feel themselves able to send their sons to so expensive institutions.

4. Because a great many farmers, entertaining a strong and decided prejudice against these higher institutions, and believing that a kind of antagonism exists between them and common schools, would never send their sons there to be educated, if they could. The same is true of common schools. Agriculture could never be successfully taught or learned in them. The reasons are obvious. Most of the scholars that attend our common schools are quite too young to understand scientific lectures on chemistry, the different kinds of soil, the composting of manures,—on natural philosophy, natural history, veterinary medicine and surgery, &c. They are not only too young to understand these studies, but, as yet, they are quite too ignorant to have their attention profitably directed to them. Scientific lectures to them would be something like scientific lectures to a foreigner, who does not understand a word of our language. They must first learn to read, write, spell, &c., before they attend to scientific lectures. Our schools are already burdened with too many studies; our scholars have a general smattering idea of almost everything, but do not *thoroughly* understand anything; so that, the effect of introducing the study of agriculture would be worse than useless. Besides, who, and how many, are to be employed in giving these scientific lectures in all our public schools? and at whose or what expense?

J. G.

Warwick, Feb. 9, 1852.

For the New England Farmer.

THE BALDWIN APPLE.

MR. BROWN:—I have ascertained from an intelligent observer of facts in Wilmington, county of Middlesex, that he knows the position in which the tree that bore the original of this apple formerly stood. It was on a farm owned by James Butters, of Wilmington, near the boundary between Wilmington and Burlington. About twenty-five years since, Mr. Butters himself showed him the place in which it stood; and, said he, the hollow, from which the stump was removed, is now distinctly to be seen.

About five years since a statement was made in the *Horticulturist* that this tree originated on the farm of Col. Jaques, of Somerville, and hence the mistaken position of the tree. Col. Jaques is a native of Wilmington,—whether he owns the ground on which Col. Baldwin first noticed the tree, I cannot say;—but that this is the true position of its origin, I have no doubt. When first noticed, the tree was distinctly marked by the operations of the woodpecker,—hence the name of Pecker apple. But the name is now well settled as Baldwin. And it seems to be admitted by all, that this apple is equal, if not superior, to any other grown in New England.

Very truly yours,

J. W. PROCTOR.

Danvers, March 10, 1852.

A FINE TREAT.—On Saturday, the 6th inst., we received a box of *Isabella grapes* from Mr. W. W. BAXTER, of Quincy, which he gathered early in October and packed in cotton. They were placed in boxes which were papered inside, covered closely and kept in a closet where the temperature was three or four degrees above the freezing point through the winter. Those presented us were as fair as ever, finely flavored, but with the slightest evidence that acetous fermentation had just commenced. Nothing can be more grateful than this delicious fruit as a winter dessert.

THE POTATO ROT.—*Another Preventive.*—Plant your potatoes in the usual way, and when the sprouts appear above ground, take from one-half to a bushel of dry wood ashes, per acre, and sow it broadcast over the ground while the dew is on. Repeat the ashes every seventh day until the crop is made—and if proof by actual experiment is to be relied on, your potatoes will be free from rot. —*Rural New Yorker.*

TO prevent oxen from crowding, it is only necessary to lengthen the yoke, often, in extreme cases from 12 to 18 inches longer than those usually worn.

BROWN'S POULTRY FEEDER.

The above engraving represents a poultry feeder which we contrived and made, and have had in use for the last year. It answers the desired purpose admirably. One or two bushels of corn may be fed at once, and thus relieve the mind for weeks of that care. It has four sides, only two of which are represented in the cut, and they afford room for twenty fowls to feed at once. It may be partitioned inside so as to feed different kinds of grain at each opening. It is not well to mix different grains in the same apartment, as the fowls are quite likely to scatter it about; but where there is only a single kind in the apartment it is rare to find a grain on the floor about the feeder.

We used to find considerable destruction to our grain from rats and mice and especially from neighboring doves in open feeding, but this contrivance has proved a remedy for any annoyance. The grain is kept free from dirt and dampness and the fowls seem to enjoy opening it fifty times a day and taking a kernel or two at a time.

Nothing more is necessary to teach the fowls to open it than to raise the doors half an inch just so as to enable them to see the grain. Various forms may be given so as to make it highly ornamental to the poultry house, or it may be constructed in the most cheap and simple manner and still answer the purpose of a feeder.

Where there are some thirty or forty fowls they make a most cheerful clatter for an hour about the

time of sunrising, by bringing the door back against the stop-board. The feeder from which the cut was drawn may be seen for a few days, at the warehouse of Messrs. Ruggles, Nourse, Mason & Co., where any person desirous of seeing it is invited to call.

For the New England Farmer.

WHAT COW SHALL I KEEP?

MR. BROWN:—I wish to keep one cow, therefore I want a good one, and before applying to those that advertise blood stock, I wish your advice as to which kind of blood cows are best for milkers, as that would be the first point in my case. I wish to know how much milk one would be likely to average through the year, with good keeping; say one from five to seven years old; and how long they generally go dry, and about what one can be bought for! with calf by a blood bull. Please answer these inquiries as soon as is convenient, and oblige yours, &c., **JAMES THOMPSON.**

Nantucket, Feb. 26, 1852.

REMARKS.—A good Alderney cow would probably be the best where the milk is required only for family use—say milk for breadmaking, for the table, with cream for the pitcher and for an occasional churning. But Alderneys are at present high and scarce, and some other breed may be found which will answer the purpose. Select a native cow four years old, with small limbs, a neck somewhat slender, lean head, small nose and tail, with a well developed bag, reaching considerably forward, and with good sized teats. A middling

sized animal with a bright, lively countenance, but at the same time gentle. Feed her upon upland hay where a ton or a ton and a half to the acre is cut, and give her the slops of the family mixed with a quart of sweet shorts twice a day, and she will probably yield you an average of four quarts of milk a day for the year. When she is six years old, if kept in the manner described, she may yield you an average of six quarts a day for four years. She ought not to go dry more than three or four weeks.

Such a cow will sell for forty dollars, quick, in most of the towns in this vicinity.

You can form no reliable opinion by inquiring, as to what breed is best for milking qualities. One will tell you the Ayrshire, another the Durham, a third the Devon, and a fourth our native breed. The point is not settled as to what breed is best for milk.

NINTH AGRICULTURAL MEETING,

AT THE STATE HOUSE, MARCH 16, 1852.

SUBJECT—The cultivation and preservation of Fruit.

HON. MARSHALL P. WILDER presided at the meeting on Tuesday evening. On taking the chair, he said that he regretted his inability to be present at the last meeting. He concurred in the sentiments then expressed, as he saw them reported in the papers, in regard to the feasibility and capability of our country for the growth of fruit, and also to the profitable character of the crop, and the necessity of a thorough pulverization of the soil, for its successful culture. He then entered upon a consideration of the subject before the meeting, and as his remarks were prepared with much care, and embody the experience of one of our most extensive and successful fruit growers, we feel that we can do our readers no greater favor than to lay before them his address in full. He said—

There are three considerations which are absolutely necessary to the successful cultivation of fruit trees, viz.:

The appropriate soil and location;

The proper preparation of the soil; and

The judicious selection of varieties.

By the appropriate soil, and location, is meant that which is naturally suited to any particular class of fruits. Nearly all our fruits will succeed in a deep mellow loam, but the cherry, the peach, and even some kinds of the apple, will flourish on a soil where the pear will survive but for a short time. Some varieties require a warm soil and southern exposure; others will succeed with a northern aspect, and under less genial influences. Some prosper in the Eastern, Middle and Western States; others only in one of these regions. But the subject of soils and location occupies so wide a field of research, that we cannot enter upon it at length during this discussion.

In relation to the proper preparation of the soil,

all intelligent cultivators agree that thorough subsoiling, or trenching, is not only the most judicious system, but in reality the most economical, in the end. The first great principle, however, to be attended to, is complete and perfect drainage; for wherever water is permitted to remain, no tree can long continue in health. Stagnant water is as injurious to vegetable life, as the miasma and malaria of pools and marshes to animal life. The drainage must not only be perfect, but its depth must be such as to prevent entirely the roots from reaching beyond it in search of food. This being accomplished, the soil should be thoroughly worked with manure to the depth of 15 inches at least; and if trenched, the upper soil should be placed at the bottom, and the lower soil on the surface, where it will become disintegrated and prepared by the influences of the atmosphere as food, or can be enriched, as necessity may require. Under such circumstances, the roots of trees will have room to search for nutrition, as wanted, and the loose and friable condition of the soil will enable the atmosphere to permeate through it, and the rains to percolate, and pass off, when too profuse, into the drainage, so that no water can ever remain to injure the roots, the disastrous effects of which on trees are everywhere visible in low moist lands.

For the want of the proper location and preparation of the soil, I am of opinion that more than one-half of all the fruit trees which have been planted in New England for the last twenty-five years, have either died out, or have failed to produce vigorous and durable subjects; and I hesitate not to express as my belief, that those which have survived would, with the requisitions above-named and care in transplanting, have attained double their present size and productiveness. Without a compliance with these principles, our advice would be not to plant, and thus save both time and money.

We cannot refrain also from alluding to the great care which is requisite in the removal of trees from the nursery. Of all careless things done in the way of cultivation, nothing is more to be censured than the barbarous manner with which trees are too frequently raised, or rather stripped out by main force without digging, thus destroying not only the small, tender roots, but splitting and mutilating the main ones. I rejoice in the belief that this practice is less common than formerly, and that it has in some of our best nurseries been reformed altogether.

Now it is principally on the young fibrous roots that newly transplanted trees must depend for receiving nourishment, and just in proportion as these have been destroyed will be the development of new wood, and the ratio of its growth; for every branch has its correlative in the root, and wherever a tree has been deprived of its roots, the

branches must be reduced in proportion, or it will take a long time before equilibrium can be restored and vigorous and healthy action again resumed.

The same injurious consequences will result from crowding and doubling back the roots of a tree into a hole just large enough to contain them, or from deep planting—for roots, like human beings, delight in the healthful influence of light and air. Trees should therefore be planted shallow, and we have met with good success where they were planted nearly on the surface and soil brought to cover them. For newly transplanted trees, nothing is more beneficial than mulching the roots during the hot summer months. This may be done with coarse litter, refuse hay, or any substance which will shade the ground, and allow the rains to pass through. Under this treatment trees will thrive better, the size and beauty of the fruit is thereby much increased, and the roots encouraged to the surface, where they can assimilate the aliment which is indispensable to health and fruitfulness.

As to the judicious selection of varieties, I have to remark, that the only safe course is to choose such sorts, and *only such*, as by uniformity of character in various localities, particularly our own, have proved to be hardy, productive, and of good quality. Experience has shown that many kinds which have been highly lauded in the catalogues of the day, are not suited to our region, whatever may have been their excellence in other places. More than three-fourths of all the foreign varieties which have been introduced within the last thirty years, are unworthy of cultivation, or are not adapted to our location. Much disappointment has therefore been experienced from this source, as well as from selecting varieties which have no other excellence than a fanciful or crack-jaw name. To remedy this evil, and to diffuse correct information on this point, I have, in compliance with frequent solicitations, prepared a list of approved varieties in the various classes of fruits. In submitting this list, I have regarded the combined character of both the tree and the fruit; for instance, the health, vigor and fruitfulness of the one, and the flavor, size and beauty of the other. But I do not pretend that each of these varieties combines all these excellencies. Seldom is this true of any one sort, but I believe, from the experience of a long course of years, that the following classifications will be found well adapted to our locality.

APPLES.

For three sorts:
Large Early Bough,
Gravenstein,
Baldwin.

For six sorts, add:
Red Astrachan,
Porter,
Rode Island Greening.

For twelve sorts, add:
Early Harvest,

Williams,
Minister,
Fameuse,
Hubbardston Nonsuch,
Roxbury Russet.

For Winter Sweet Apples:
Seaver Sweet,
Danvers Winter Sweet,
Tolman's Sweet,
Lyman Sweet.

For new sorts of high reputation, but not yet fully proved in this region:
Northern Spy,

Ladies' Sweeting,
Melon,
Hawley,
Wagener.

Our country abounds in native varieties of apples, which are superior to most foreign sorts.—Our list might be extended and perhaps hereafter improved.

PEARS.

For three varieties:

Bartlett,
Vicar of Winkfield,
Beurre d'Arenberg.

For six varieties, add:

Bloodgood,
Louis Bonne de Jersey,
Golden Beurre of Bilboa.

For twelve varieties, add:

Andrews,
Belle Lucrative,
Seckel,
Flemish Beauty,
Urbaniste,
Glout Morceau.

For twenty-four varieties, add:

Jargonelle,
Dearborn's Seedling,
Beurre d'Amalix,
Tyson,
Bullum,
Dunmore,
Long Green,
Duchesse d'Angouleme,
Beurre Die,
Fulton,
Winter Nellis,
Easter Beurre,

Varities for Orchard Culture:

Jargonelle,
Bartlett,
Golden Beurre of Bilboa,

Vicar of Winkfield,
Fulton,
Bullum,
Urbaniste,
Beurre d'Arenberg.

New varieties of Foreign origin partially proved, and which promise well:

Doyenne Bousouch,
Smith's Bordenave,
Figue,
Paradise d'Antonne,
Beurre d'Anjou,
Nouveau Poiteau,
Beurre Langlier,
Van Assene,
Soldat Labourer,
Triomphe de Jodoigne,
Duchesse d'Orleans,
Jalousie de Fontenay,
Doyenne gris d'hiver—new.

New American varieties of good promise:

Westcott,
Pratt,
Chancellor,
Sheldon,
Brandywine,
Onondaga,
Howell,
Ott,
Collins,
Kinsessing.

PEACHES.

For three sorts:

Early York, (serrated foliage),
Crawford's early,
Old Mixon Free.

For six sorts, add:

Large Early York,
George Fourth,
Crawford's Late.

For twelve sorts, add:

Grosse Mignonne,
Bergen's Yellow,
Druid Hill,
Late Admirable,
Yellow Rarieripe,
Heath Free Stone.

PLUMS.

For three sorts:

Green Gage,
Jefferson,
McLaughlin.

For six sorts, add:

River's Favorite,
Lawrence's Gage,
Purple Gage.

For twelve sorts, add:

Reine Claude de Bavay,
Bleeker's Gage,
Imperial Gage,
Smith's Orleans,
St. Martin Quetsche,
Yellow Gage.

CHERRIES.

For three sorts:

May Duke,
Black Tartarian,
Downer's Late.

For six sorts, add:

Belle d'Orleans,
Black Eagle,
White Bigarreau.

For twelve sorts, add:

Elton,
Downton,
Late Duke,
Knight's Early Black,
Sweet Montmorency,
Sparhawk's Honey.

PEARS ON THE QUINCE STOCK.—Much attention has been given of late years to the cultivation of the pear on the quince stock, and in relation to which I have been requested to give the results of my experience. As a general rule, no tree will succeed for any great length of time where it is grafted on any other than its own species. There are, however, exceptions to this rule, and among them, some varieties of the pear, which grow vigorously, bear abundantly, and which seem to be

even better adapted to the quince, than to their own root.

An impression has extensively prevailed unfavorable to the cultivation of the pear on the quince. This has arisen principally from an improper selection of kinds, or from injudicious cultivation.—There are, however, three considerations which are absolutely necessary to success, viz., a deep, rich soil,—the planting of the quince stock entirely below the surface of the ground,—and a systematic and scientific course of pruning, as the tree progresses in growth.

Objections to this species of cultivation have been made from the belief that the quince was a short-lived tree, and that the crop must necessarily be small from what are termed dwarf trees.—Such, however, has not been my experience. On the contrary, I have pear trees on the quince root which are twenty-five years old, and which produce annually a barrel or more of fruit each, and for aught that I can see, they are destined to survive as long as any that I possess on the pear root. These may, and probably have in some instances, thrown out roots from the pear stock, but whether this be so, or not, instances are not rare where such trees have attained in France the age of more than a hundred years, and we know of a quince tree in Massachusetts which is 40 years old, and which has produced 10 bushels of fruit in a season.

The pear, when grown on the quince, should always be trained in the pyramidal form. These may be planted in much closer order than when grown as standards. We have known them to succeed well where grown at the distance of 6 feet apart in the rows and 12 feet between the rows. In this way Mr. Rivers, the great English cultivator, planted 2500 Louise Bonne de Jersey and 1500 Glout Morecaus for the London market. We consider 12 feet apart, each way, a liberal distance. This would give 302 trees to the acre, and we are clearly of the opinion, that soil and selection of varieties being right, no crop whatever would be more profitable. Such a plantation, with proper care, would yield, in the fifth year, from 75 to 100 bushels of fine fruit. As to profit, this will not appear as an exaggeration, when it is known that Glout Morecau pears, a variety which succeeds admirably on the quince, have sold during the winter readily at one to two dollars per dozen, in our market.

We name as varieties which succeed well on the quince the following, and to which might be added many more:

Louis Bonne de Jersey,
Vicar of Winkfield,
Duchess d'Angouleme,
Glout Morecau,
Passe Colmar,
Urbaniste,

Belle et Bonne,
Beurre d'Anjou,
Beurre Diel,
Easter Beurre,
Beurre d'Amouille.

There are many other topics which relate to the successful cultivation of fruits, on which I should be happy to address the meeting, did the time al-

lotted to the chair, or my personal health or strength permit; such, for instance, as the *appropriate manures, scientific pruning, diseases of trees, and the importance of raising new varieties from seed which shall be perfectly adapted to our region.*

We must, however, confine our remarks to the other part of our subject,—

THE PRESERVATION OF FRUITS.—This is as important as any of the topics which have engaged our attention, for although the cultivator may be blessed with an abundant harvest, yet without a knowledge of the art of preserving his crop for future use, much of his labor would be unavailing. For the want of proper care in gathering and keeping our crops of fruit, it is estimated that one-third is annually lost, or materially injured in value.

Few persons are aware of the great care which is requisite in the *gathering of fruits*, and unless this part is well done, and done at the proper time, all future efforts for its preservation will be unsuccessful.

As a general rule, with regard to apples and pears, they should be gathered a few days before maturity. By this means, even summer varieties may be preserved for weeks, if stored in a properly constructed room. The flavor is also improved, and they may be kept for a much longer time than when left to ripen on the tree. They should never be permitted to remain after the tree commences to drop its foliage, because the flavor will be impaired, after vegetation has ceased to perform its office.

Apples and pears should be picked by the hand, and in a clear, dry day, for, whenever an injury takes place by bruising, although it be but an indentation by the thumb, there decay surely and soonest ensues.

So important is the process of gathering deemed by one of the largest exporters of apples to Europe, that he never allows a specimen to be packed which has an imperfection. Nor does the care cease here. The barrels are either carried on the shoulder, or on hand barrows to the vessel, by which they are to be shipped. They consequently arrive in sound condition and command from \$6 to \$9 per barrel in Liverpool. The necessity of this system has been fully tested by the fact, that apples which had been pressed by the thumb as an experiment, were found to be in a partial state of decay, and would bring only one-third, or half price, of sound ones.

For the long keeping of fruits, a properly constructed room is an indispensable condition.—Some fruits, particularly winter apples, may be kept for months with ordinary care. This our farmers understand pretty well, by keeping them in cool, dry cellars; but the preservation of the more tender varieties, and especially the pear, is attended with greater difficulty.

The principal prerequisite is a room where per-

fect command may be had of the temperature. For this purpose it must be constructed so as to admit, or exclude, the external atmosphere, as circumstances shall require.

A very satisfactory experiment was made many years since at Paris, which is fully described in the Transactions of the Massachusetts Horticultural Society. By this method many thousands of pears and apples were preserved until the month of June, and for which the Royal Horticultural Society awarded a special medal. The room was constructed with exterior and interior walls, with a space of about three feet between them, or, in fact, a room within a room.

These fruits were placed in drawers, in single layers, and nearly covered with powdered charcoal and sawdust, care having been taken previously to allow the fruit to pass through what is usually called the sweating process. This is, however, only the deposition of dew or moisture occasioned by the cooling off of the fruit to the temperature of the room, and during which, if piled in large heaps, or packed in close boxes, injury is sure to ensue.

Much attention has been given of late to the construction of fruit rooms, several plans having been recently published, all of which are based on the principles here laid down, viz.:—*perfect command of the temperature, and exclusion of moisture.*

An account of one of these rooms with double walls was given in the *Revue Horticole*. It has since been translated into the *Gardener's and Farmer's Journal*, and appears in *Hovey's Magazine of Horticulture* for this month.

This plan differs but little from the one to which I have alluded, except that the walls here are filled in with moss 18 inches thick, and to absorb any excess of moisture, a box of chloride of calcium is placed on a table in the centre of the room. This we think may be an improvement—for a proper hygrometric state of the atmosphere is as necessary to be preserved as the state of the temperature. What particular degree of moisture is required to keep fruit from shrivelling, we have not yet ascertained, and we think that probably different fruits, according to the texture of the skin would require different hygrometric states.

The London *Gardener's Chronicle* for last Nov. contains drawings and descriptions of a fruit room constructed by a Mr. Moorman on a similar plan, except that his building has single walls with a space of but a few inches between them, and in which he was able to keep the autumnal pears, such as Marie Louise, into winter. Experiments are also in progress in this city, by which it is hoped that even the more delicate fruits, such as peaches and plums, may be preserved beyond their usual season, or transported to other countries.

Time will not permit me to enlarge on this sub-

ject. I will, therefore, confine my remarks more particularly to my own experience.

Having found it impossible after a trial of years to maintain an equable temperature in my fruit cellars, I constructed a room in the north part of my barn, over the carriage house. The walls and roof of this apartment are filled in with fine charcoal and sawdust to the thickness of about 4 inches. There is only one window, which faces to the north, and this is furnished with double blinds to exclude the light, as well as the external air. The room is arranged with shelves about 4 feet wide, and upon which the fruit is placed in single layers, never allowing one to rest upon the other.

The fruit being stored, the great object is to maintain a low and uniform temperature, thus holding the ripening process in suspense; for with increased warmth, fermentation would commence, and the fruit mature; or with too low a temperature, it would lose its powers of resuming it. The secret, therefore, is to hold in check this fermentation or ripening process, until the fruit is desired for use, and this can only be secured by perfect command of the temperature. From my own experiments I am of opinion that a temperature of about 40 degrees of Fahrenheit will accomplish this object. In confirmation of this opinion, I have before me a few specimens of Beurre Diel, Vicar of Winkfield, and other pears, some of which usually ripen in October and November, which it will be seen are not yet in eating condition.

These fruits have had no other care than that of admitting or excluding the external atmosphere to regulate the temperature. They remained on the shelves until after the severe weather of December, when they were packed up in boxes with clean rye straw between each layer, stowed away on one side of the room, and covered up with hay. Of the straw I entertain a favorable opinion, containing, as I suppose, sufficient air in its tubes to prevent moisture, and having a dry silicious coat, not likely to communicate it to the fruit.

From my observations, I entertain no doubt but apples and pears may be kept through the winter and most of the spring months in perfection, by the method we have endeavored to describe, viz., a cool, dry room, with non-conducting walls, and the means of regulating the temperature by the admission or exclusion of the external atmosphere.

This, it is believed, can be more easily accomplished with a northern exposure, and better in an upper room than on the ground floor, or in the cellar, where the heat is continually rising from the earth. [Another method for the preservation of small quantities, and by which fruit may be kept over to the summer months, is to pack it in a box within a box, and to fill the space between with fine charcoal and ground plaster, or plaster and fine salt; either of which will answer the purpose,

if the fruit is put up in cool, dry weather, and stored in a cool room of the same temperature.]

Mr. WILDER closed with some appropriate remarks upon the duty of setting out fruit trees, and mentioned several instances in which persons from 70 to 90 years of age had set out trees and lived to partake of the fruits thereof.

Hon. JOHN C. GRAY said that he believed the French author quoted by the President preferred the admission of the light to its exclusion, in rooms for ripening fruit. He understood the chairman to say that he preferred its exclusion. He wished to ask if he was right in this opinion.

Mr. WILDER replied that he considered the admission of the light not beneficial. By excluding it the fruit attains a more beautiful color.

Hon. B. V. FRENCH, of Braintree, next addressed the meeting, and advocated, as the first matters to be attended to in the cultivation of fruits, thorough draining of the land, and its thorough subdivision. He trenches his ground from 18 to 24 inches deep, and lays drain pipes 24 inches apart. Much depends upon setting out the trees. They should not be set too deep. He had tried setting out on the inverted sod, and out of 400 trees lost but two.

If the roots are covered to the depth of an inch it is sufficient. They will work down themselves sufficiently. Mr. French also spoke of the necessity of having the orchard properly enclosed in order to prevent the trees from being injured by the cattle. When cattle rub against them the trees should be immediately washed with ashes and water to remove the grease.

Mr. French is a large cultivator, and the following list, given as the result of his experience and judgment, is deserving the attention of those about setting out fruit trees.

As the best *early* apple, Mr. French recommends the *Early Harvest*. The best apple is the *White Seek-no-further*. If he had but one apple tree he would prefer the *R. I. Greening*. The best sweet apple is the *Seaver*. For two varieties he recommends the *Porter* and *Rhode Island Greening*. For the four best summer varieties, the *Harvest*, *Red Astracan*, *Williams Favorite*, and *Summer Pearmain*. Four best autumn varieties, *Porter*, *Fomeuse*, *Gravenstein*, and *St. Lawrence*. Best five winter varieties, *R. I. Greening*, *White Seek-no-further*, *Baldwin*, *Roxbury Russet*, and *True Nonsuch*. The best apple for stewing is the *Hawthornder*.

If he could have but one cherry, it would be *Downer's Late Red*; the best of all cherries is the *Knight's Black Eagle*. The earliest cherry that is prolific is the *May Duke*—the latest, the *Late Duke*.

The *Green Gage* he considered the best of plums. If one plum is to be selected, he would prefer *Prince's Imperial Gage*; for two, add *Smith's Orleans*; for three, *Coe's Golden Drop*.

For strawberries, he would prefer *Jenny's Seedling*, and next to that, *Willey's Seedling*.

Of currants, which he called the *Prince of fruits*, he knows of none better than our old *Red* variety.

He also spoke of the need of caution in selecting trees—not to seize upon every kind which is highly recommended, before it has been fairly tested. In 1831 he said the London Horticultural Society had upon its catalogue 1400 varieties of apples; in 1842, it had reduced the number to 900 varieties, and it would probably be still further reduced. We do not want, he said, more than 30 or 40 varieties. In conclusion, he called the attention of the meeting to the *currant*, which he said he sometimes thought to be the *Prince of fruits*. He approved of trimming out the old wood, but would cultivate the plant as a bush rather than a single stem, as is done in the old country. There is no fruit, he said, which requires so high tillage, and so much care, as the pear—and which so well compensates for this care. Unless this high tillage can be given it, there is but little use in attempting to raise pears.

Dr. GARDNER, of Seekonk, said that farmers ought not to be discouraged if they found themselves unable to practice such deep trenching and thorough tillage as had been recommended. They could raise fruit in land less thoroughly tilled, and in grass land—though they might not get so large crops.

In regard to cultivating trees in a henery, as suggested by a gentleman at the previous meeting, Mr. FRENCH said that he had tried it, and found that the hens appropriated the buds to themselves, and he, of course, lost his fruit.

JOHN MILTON EARLE, of Worcester, spoke of *Coe's Golden Drop* plum, and said that he had had good success in ripening it. When it first came into bearing his success was not so good, but after a year or too, he had no trouble at all; it bears extremely well, and ripens as perfectly as any plum he ever saw. It is a very valuable variety, as it comes in after the plum season is nearly over. Mr. Earle said that in discussing the mode of cultivation of the pear the great diversity in the character of this fruit ought to be taken into consideration. Some varieties will do well with even tolerable orchard cultivation. Still they would do better with high cultivation, of which he approved, and believed it to be cheapest in the end. He differed from the opinion generally entertained—that many of our foreign varieties will never come to anything here. He believed that when their proper mode of culture and ripening is well understood, they will be found to be here all that they are represented abroad. The great trouble is we do not understand their proper mode of culture and process of ripening.

Major WHEELER, of Framingham, spoke in favor of cultivating plum trees in a henery, and con-

sidered this course one of the most effective remedies for the curculio.

Ladies' Department.

DOMESTIC RECIPES.

HAM TO BROIL.—Cut the slices very thin, take off their skin, put them on a gridiron, and over a hot fire, turn them in one minute; two minutes will cook them sufficiently; no seasoning is necessary; serve with piccalilli.

HAM TO FRY.—Cut the slices very thin, take off their skin, put them into a hot spider, and turn them frequently, until a little crisped; be careful not to burn the slices; three minutes will fry them well; serve in a hot dish.

TO MAKE SANDWICHES.—Rub one table spoonful of mustard flour into half a pound of sweet butter; spread this mixture upon thin slices of bread; from a boiled ham, cut very thin slices, and place a slice of ham between two slices of the bread prepared as above; cut the sandwiches in a convenient form, and serve.

Some people chop the trimmings of the boiled ham very fine, and lay them between the slices of prepared bread.

This is a good dish for lunch or evening entertainments.

EXCELLENT SAUSAGE CAKES.—Chop lean pork very finely, having removed all the bone and skin previously, and to every pound of meat add three quarters of a pound of fat bacon, half an ounce of salt, a pinch of pepper, a quarter of a nutmeg, grated, six green onions, chopped finely, and a little chopped parsley; when the whole is well chopped and mixed, put it into a mortar and pound well, finishing with three eggs; then have ready a pig's caul, which cut into pieces large enough to fold a piece of the above preparation, of the size of an egg, which wrap up, keeping the shape of an egg, but rather flattened, and broil very gently over a moderate fire.

THE SECRET.

I noticed, said Franklin, a mechanic among a number of others, at work on a house erecting but a little way from my office, who always appeared to be in a merry humor, who had a kind word and a cheerful smile for every one he met. Let the day be ever so cold, gloomy, or sunless, a happy smile danced like a sunbeam on his cheerful countenance. Meeting him one morning, I asked him to tell me the secret of his constant happy flow of spirits. "No secret, Dr.," he replied; "I have got one of the best of wives, and when I go to work she always has a kind word of encouragement for me, and when I go home, she meets me with a smile and a kiss, and then tea is sure to be ready, and she has done so many little things through the day to please me, that I cannot find it in my heart to speak an unkind word to anybody." What an influence, then, hath woman over the heart of man, to soften it and make it the fountain of cheerful and pure emotions. Speak gently, then,—a happy smile and a kind word of greeting, after the toils of the day are over, costs nothing, and go far toward making a home happy and peaceful.

Mexican Guano.

A NEW ARTICLE is now offered to the Agriculturist and Dealers, under the above name, from its having been found near the Mexican coast. It has been analyzed by C. T. Jackson, M. D., State Assayer, Boston, Dr. David Stewart, of Baltimore, and others. Dr. Stewart says it contains the largest proportion of Phosphates he has ever met with in Guano.

The following are the result of the analysis made by C. T. Jackson, M. D.:

Water.....	33 40
Vegetable Matter.....	15 80
Soluble Salts (in Water) Phos. Soda.....	0 12
Phosphates of Lime and Magnesia.....	60 50
Insoluble Matter (Silex).....	0 10

99,93

The quality of this Guano as a rich fertilizer, and the great reduction in price compared with the Peruvian, is such as to render it an object for the agriculturist and dealers to buy and give it a trial. It has been tried in the vicinity of Norfolk, Va., and much approved by the Farmers, those who are now buying and using of it freely. It may be obtained in lots to suit purchasers of A. D. WELD, 127 State Street, PHINEAS SPRAGUE & Co., T Wharf, or of P. A. STONE, who is the importer, and may be found at 15 Crescent Place, Boston, where also other information may be obtained respecting it. It is also for sale by Parker & White, 8 and 10 Gerlish Block, Blackstone Street, D. Prouty & Co., 19 North Market Street. March 27.

Country Residence in Milton, FOR SALE.



This estate, situated near the Blue Hill, 10 miles from Boston, and 1½ from the Reedville Station, on the Providence Railroad—consists of 40 acres of land, convenient house containing 11 rooms, a large barn 60 by 40 feet, a grape house in full bearing, pig sty, hen house, orchard and garden, well stocked with apples, pears, peaches, plums, currants, raspberries and strawberries; also, a never failing fountain of water carried into the house, grape and barn-yard.

If not sold previous to the 10th of April, this estate will then be offered at auction. Possession given by the middle of April. For further particulars inquire of S. W. RODMAN, No. 11 Chestnut Street, or of the subscriber on the premises. March 22, 1852. 4w*1 ALFRED RODMAN.

Farm for Sale in Concord, Mass.,



Situated half a mile from the village, on the road to Lowell, containing about seventy-five acres of good land, well divided into Mowing, Tillage, Pasturing and Woodland, and having thereon an excellent Orchard and Cranberry Meadow. Said farm is well enclosed with good walls, and is considered one of the pleasantest situations in the county of Middlesex. Connected with the farm, and lying about one and a half miles therefrom, is a good Pasture, containing about sixty acres, which will be sold with it, if desired.

For further particulars inquire of SIMON BROWN, Esq., editor of New England Farmer, or Concord, Mass., Feb. 28. t* JOHN B. MOORE.

Pure Devon Stock.

COWS, HEIFERS, BULLS and BULL-CALVES for sale. Apply at Office of N. E. Farmer, or to the subscriber. B. V. FRENCH, Dec. 27, 1851. 1yr* Braintree, Mass.

Blood Stock for Sale.

FREE BULL CALVES; one will be one year old the 8th of March; one the thirtieth of March, and the other the 17th of May. All of them ½ Durham and ½ Ayrshire. And offers to go with them, if desired.

Likewise, I offer for sale thirty young calves in March, April and May, sired by the Bay State Sultan, and from the best of blood cows. Persons wishing any of the above stock, will do well to call and examine for themselves; and I hesitate not in saying that the stock will suit, and is as good as any before offered.

Those who favored us with purchases last season, can be as well accommodated this.

Letters by mail for further information will receive prompt attention. S. T. ATHERTON. South Groton, Mass., March 2, 1852. 3w*1*

Cattle Ties.

OX AND COW TIES, of all sizes, a large assortment; also, Draft and Trace Chains; just received and for sale low by RUGGLES, NOURSE, MASON & CO., (over the Market,) Boston. 3m* Jan. 10.

For Sale,

Four pleasantly situated dwellings in ELIOT STREET, JAMAICA PLAIN.

Also, two farms on WELD STREET, WEST ROXBURY;—the one containing about forty acres, with house and barn; the other containing about twenty-three acres, with house and two barns.

But a small portion of cash is wanted for any of this property. Apply to J. C. GORE, Jamaica Plain. Feb. 21, 1852. 2m—2

Ayer's Cherry Pectoral,

FOR THE CURE OF

COUGHS, COLDS, HOARSENESS, CROUP, WHOOPING COUGH, BRONCHITIS, ASTHMA AND CONSUMPTION.

THIS invaluable remedy for all diseases of the Throat and Lungs has attained a celebrity, from its remarkable cures, never equalled by any other medicine before. Other preparations have shown themselves palliatives, and sometimes effected notable cures, but none has ever so fully won the confidence of every community where it is known. After years of trial in every climate, the results have indisputably shown it to possess a mastery over this dangerous class of diseases which could not fail to attract the attention of physicians, patients and the public generally.

See the statements, not of obscure individuals, and from far distant places, but of men who are known and respected throughout the country.

The widely-celebrated surgeon, Dr. VALENTINE MOTT, of New York city, says:—"It gives me pleasure to certify the value and efficacy of *Ayer's Cherry Pectoral*," which I consider peculiarly adapted to cure diseases of the throat and lungs."

Dr. PERKINS, the venerable President of the Vermont Medical College, one of the eminently learned physicians of this country, writes, the *Cherry Pectoral* is extensively used in this section, where it has shown unmistakable evidence of its happy effects upon pulmonary diseases.

Rev. JNO. D. COCHRANE, a distinguished clergyman of the English Church, writes to the proprietor from Montreal that "he has been cured of a severe asthmatic affection, by *Cherry Pectoral*." His letter, at full length, may be found in our Circular, to be had of the Agent, and is worth the attention of asthmatic patients.

This letter is from the well-known Druggist at Hilldale, Michigan, one of the largest dealers in the State; and this case is from his own observation:

HILLDALE, MICH., Dec. 10, 1849.

Dear Sir:—Immediately on receipt of your *Cherry Pectoral* I carried a bottle to an acquaintance of mine who was thought to be near his end with quick consumption. He was then unable to rise from his bed, and was extremely feeble. His friends believed he must soon die, unless relief could be obtained for him, and I induced them to give him your excellent medicine a trial. I immediately left town for three weeks, and you may judge of my surprise on my return, to meet him in the street on my way home from the cars, and find he had entirely recovered. Four weeks from the day he commenced taking your medicine, he was at work at his arduous trade of a black smith.

There are other cases within my knowledge, where the *Cherry Pectoral* has been singularly successful, but none so marked as this. Very truly yours,

G. W. UNDERWOOD.

PREPARED AND SOLD BY JAMES C. AYER, Practical Chemist, Lowell, Mass.

Feb. 14, 1852.

3m

American Veterinary Journal,

DEVOTED to the Diffusion of Veterinary Knowledge, and its collateral sciences. Published monthly, octavo form, containing thirty-two pages, making at the end of the year a handsome volume of three hundred and eighty-four pages, to which an Index will be furnished.

Price \$1.00 per year in advance. Six copies for \$5.00.

Edited by GEORGE H. DADD, Veterinary Practitioner, to whom all communications, post-paid, must be directed. Boston, Feb. 14.

2w—24

Spring Seed Grain.

300 BUSHELS WHEAT, (Black, Sea, Scotch Fife, Bald Club and Java.

200 bushels Buckwheat.

800 do. Barley.

200 do. Spring Rye, (Trus.)

800 do. Bedford Oats.

100 do. Millett.

10 do. African Millett, (Estra.)

For sale by RUGGLES, NOURSE, MASON & CO., March 20, 1852. if Over Quincy Market, Boston.

LEWIS G. MORRIS'

THIRD ANNUAL SALE, BY AUCTION, OF

Improved Breeds of Domestic Animals

WILL TAKE PLACE AT

MOUNT FORDHAM, Westchester Co., (11 miles from City Hall, New York,) on Wednesday, JUNE 9, 1852.

JAMES M. MILLER, Auctioneer.

APPLICATION need not be made at private sale, as I decline in all cases, so as to make it an object for persons at a distance to attend. Sale positive to the highest bidder, without reserve.

Numbering about fifty head of Horned Stock, including a variety of ages and sex, consisting of Pure Bred Short Horns, Devons, and Ayrshires; Southdown Buck Lambs, and a very few Ewes; Suffolk and Essex Swine. Catalogues, with full Pedigrees, &c., &c., will be ready for delivery on the first of May—to be obtained from the subscriber, or at the offices of any of the principal Agricultural Journals or Stores in the Union. This sale will offer the best opportunity to obtain very fine animals I ever have given, as I shall reduce my herd lower than ever before, contemplating a trip to Europe, to be absent a year, and shall not have another sale until 1854.

It will be seen by reference to the proceedings of our State Agricultural Society that I was the most successful exhibitor of Domestic Animals, at the late State Fair.

I will also offer a new feature to American Breeders—one which works well in Europe; that is, letting the services of male animals; and will solicit propositions from such as see fit to try it. CONDITIONS—The animal hired, to be at the risk of the owner, unless by some positive neglect or carelessness of the hirer; the expense of transportation to and from, to be borne jointly; the term of letting, to be one year or less, as parties agree; price to be adjusted by parties—to be paid in advance, when the Bull is taken away; circumstances would vary the price; animal to be kept in accordance with instructions of owner, before taking him away.

I offer on the foregoing conditions, three celebrated Prize Bulls, "Major," a Devon, nine years old; "Lamartine," Short Horn, four years old; "Lord Eryholme," Short Horn, three years old. Pedigrees will be given in Catalogues.

At the time of my sale, (and I would not part with them before) I shall have secured two or three yearly sets of their progeny; and as I shall send out in August next a new importation of male animals, I shall not want the services of either of these next year. I would not sell them, as I wish to keep control of their propagating qualities hereafter.

I also have one imported Buck, the prize winner at Rochester last fall, imported direct from the celebrated Jonas Webb; and also five yearling Bucks, winners also, bred by me, from Bucks and Ewes imported direct from the above celebrated breeder; they will be let on the same conditions as the Bulls, excepting that I will keep them until the party hiring wishes them, and they must be returned to me again on or about Christmas Day. By this plan, the party hiring gets rid of the risk and trouble of keeping a Buck the year round. All communications by mail must be prepaid, and I will prepay the answers.

Mount Fordham, March, 1852.

L. G. MORRIS.

1w*3m

Walnut Grove Nursery.

JAMES HYDE & SON.



We have for sale at our Nursery a larger assortment of trees than ever before offered by us, consisting in part of Apple, Pear, Plum, Cherry and Peach.

Also, Quinces, Currants, Raspberries, Grapevines, &c. &c.

Ornamental Trees and Shrubs, Buckthorn Plants, &c. &c. A prime lot of Red Dutch Currants, good size, \$5 per hundred, or \$40 per thousand.

Fine Apple trees, three to five years' growth from bud, seven to nine feet high, \$25 per hundred, or \$200 per thousand.

We devote ourselves solely to the raising of trees; they receive our strict personal attention; we are therefore able to warrant every article true to name.

Those who intend purchasing large quantities of Apple trees are respectfully invited to call before purchasing, and examine our stock, as it is large, and doubtless unsurpassed by any in the vicinity.

A liberal discount on all articles by the hundred.

Orders for Scions, (if sent early,) faithfully attended to.

Trees delivered in Boston free of expense, packed if desired. Catalogues sent to post-paid applicants.

All orders thankfully received, and promptly executed.

JAMES HYDE & SON.

Newton Centre, Feb. 21, 1852.

3m*

Bound Volumes.

BACK VOLUMES of the NEW ENGLAND FARMER, elegantly bound in Muslin, Gilt and Embossed, are now for sale at this office.

Boston, March 20, 1852.

1P

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Fruit Trees—Fruit Stocks.



The subscriber offers for sale at the nursery of the late S. W. COLE, in Chelsea, a general assortment of Apple, Pear, Plum, Cherry and Peach trees, among which are many new and superior varieties, such as choice kinds of Apples, Kirkland's new Cherries, McLaughlin and other Plums, and hardy seedling Peaches of northern origin.

Also, Grape-vines, Quinces, Currants, Gooseberries, Raspberries, Thimbleberries and Cranberries. Among the Grapes are the famous Diana. Among the Gooseberries are Houghton's Seedling, the most valuable of all varieties, being hardy against the blight, and a great grower and bearer.

12,000 Cherry Stocks, from one to three years old.

10,000 Apple Stocks, from one to four years old.

Also, Pear, Plum and Quince Stocks, in smaller quantities.

✓ All orders thankfully received, and promptly executed, under the superintendence of an experienced nurseryman.

MARTHA S. COLE.

✓ Ruggles, Nourse, Mason & Co., Agents, Quincy Hall, Boston. March 6.

Fruit Trees.



The proprietors offer for sale a large and fine stock of Fruit, and Ornamental Trees, Shrubs, Buckthorn Plants &c.

Pear, Apple, Peach, Cherry and Plum Trees of choice standard varieties. Also Quinces, Gooseberries, Currants, Raspberries, Strawberries, Grape Vines, &c.

Extra sized Hamburghs for the Conservatory or Grapery. A fine lot of Cherry and Apple Trees, two to four years from bud. The whole for sale at reduced prices.

D. & G. F. STONE,
Hammond Street, East Newton.
w161—417

Jan. 10, 1852.

Seed Potatoes.

CHOICE Early and Late sorts can be procured at our Seed Store. We invite particular attention to the "Eastern Early Blue," for very early, and the "Danvers Seedling" for late crops; of the latter sort 882 bushels were grown from 28 bushels of seed, the past summer.

RUGGLES, NOURSE, MASON & CO.,
Boston. March 27. Over Quincy Market.

NEW ENGLAND FARMER,
WEEKLY,

AN INDEPENDENT JOURNAL,—PUBLISHED EVERY SATURDAY, ON A LARGE, HANDSOME FOLIO SHEET.

The proprietors design furnishing a first-class Agricultural and Family Newspaper—a Journal which shall be valuable to the Farmer, the Mechanic, and all other professions; and at the same time, equally welcome to the Home Circle. They are happy in announcing the names of SIMON BROWN as Editor, and FREDERICK HOLBROOK and HENRY F. FRENCH, Associate Editors,—gentlemen who have had practical experience on their own farms, and who are too well known by the public to require any farther introduction or recommendation from us.

Besides the main subject of Agriculture, will be included Horticulture, Floriculture, Arboriculture, and the various sciences connected with these branches, such as Geology, Chemistry, Botany, Meteorology, Zoology, &c. Rural Architecture, Landscape Gardening, Rural Embellishments, Domestic Economy and Mechanic Arts will also claim particular attention. Careful attention will be given to the Markets, wholesale and retail, every week.

The other departments of the paper, under the charge of WILLIAM SIMONDS, will include a full and careful report of the news of the week, such as Domestic, Foreign and Marine Intelligence, Congressional and Legislative proceedings, Temperance and Religious Intelligence, and a general variety of Literary and Miscellaneous matter, adapted to family reading, comprising more useful and valuable reading matter than any other Agricultural Newspaper published in New England. Everything of a hurtful or even doubtful tendency will be carefully excluded from its columns.

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MONTHLY,

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NUMEROUS ENGRAVINGS.

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THE subscriber has now on hand, and will furnish to agriculturists, Horse Shoe and Sole Tiles of the most approved patterns, suitable for land drainage, of a superior quality, of over one foot in length, 2½, 3½ and 4½ inches calibre, at \$12, \$15 and \$18 per 1000 pieces. They are formed to admit the water at every joint, draining land from 12 to 20 feet each side of the drain, being the cheapest and most durable article used. The great importance of thorough drainage is daily becoming more apparent.

Orders from a distance will receive prompt attention.
Albany, N. Y., March 20. 1w—6 JOHN GOTT.

PALMER'S

Second Importation of Shanghaes.

FOR SALE, a COCK and two PULLETS. For the merits of this stock see *New England Farmer*, March number, page 126. Address W. CLIFT, March 20, 1852. 4w—17 Stonington, Ct.

To Agriculturists.

SITUATION WANTED, as Farmer or Gardener, by a man who has had much experience in the different departments of his profession now in practice in Europe, which his testimonials will verify. Good reference given.

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March 27, 1852. 4w—17

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. IV.

BOSTON, MAY, 1852.

NO. 5.

RAYNOLDS & NOURSE, PROPRIETORS.
OFFICE...QUINCY HALL.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

FARM WORK FOR MAY.

Now the bright morning star, day's harbinger,
Comes dancing from the east, leads with her
The flowery May, who from her green lap throws
The yellow cowslip and the pale primrose.
Hail, bounteous May! that dost inspire
Mirth, and youth, and warm desire;
Woods and groves are of thy dressing,
Hill and dale both boast thy blessing!
Thus we salute thee with our early song,
And welcome thee, and wish thee long.—MILTON.

MAY is always a busy month, but cold winds and storms occupied so much of April that but little could be done by way of preparation for planting and sowing. But if the work of the farm is reduced to a system, so that the business which needs it most shall be attended to first, a great amount of labor may be accomplished in the month by two or three pairs of stout hands urged by earnest hearts. Vegetation will undoubtedly be very rapid. The intense cold through the winter and its long continuation in the spring, has given plants great sensibility, and they will burst into life with wonderful rapidity. The lateness of the season will find the sun running high and warming the ground so readily that the seeds will sprout and be up, perhaps, as early as in warmer seasons—so that there is no room for discouragements, but plenty to be up in the morning with the lark, and improve each hour to the best advantage.

Plowing.—Split the Indian hills; plowing the fields one or two days before planting or sowing them is better than a longer time, if the land is ordinarily dry. Sward land intended for corn is improved by a good coat of grass turned under, so that the longer it is left the better, if in season for the corn. The best crops of corn we have seen of late years were where a large portion of the manure had been spread and plowed in, and before dropping the corn a small amount of good compost added to the hill; this gives the kernels an early start and supports them until the roots find sustenance further off.

GRAIN.—As soon as the ground is sufficiently dry to fall into fine particles upon being plowed,

sow oats, barley and other grains. When it is to be laid down to grass, be generous with the seed—we mentioned this last month and now urge it again—one bushel of red top, twelve quarts of herds grass and six pounds of clover is not too much to the acre. The difference in the crop for four or five years will pay more, each year, than the extra cost of the seed; and the thickness of the grass from the seed you sow will keep out wild grasses and weeds.

CORN.—Some persons are becoming dissatisfied with this crop. It can scarcely be doubted, however, that it may be raised with profit in every part of New England. We think the dissatisfaction arises from the attempt to cultivate too much; the manure being spread over so much ground as scarcely to be felt by the plants. The result of such cultivation is twenty to forty bushels to the acre, instead of forty to eighty as it should be. We think the fodder on an acre of good corn will well nigh pay the expense of cultivation, if it is properly preserved. And with high cultivation the land is in condition after the corn crop to bring two or three tons of hay to the acre for some three to six years, with the application of slight top dressing.

GRAFTING.—The earlier this is done in May the better. If you have old healthy trees they will yield you a return for working them over and cultivating them much quicker than you can possibly get it from young trees. A large, sound, old apple tree, though producing nothing but crab-apples, is worth fifty dollars, if it stand near home and convenient for cultivation; some are worth twice that amount. Now is the time to act upon it. We have seen a tree from which, we have repeatedly been informed, more than twenty barrels of marketable apples have been taken in a single year. It is a Baldwin, and bears more or less, every year—but has every advantage which high cultivation affords. The modes of grafting are well understood—we will only add—what

seems not to be fully appreciated yet—that an apple tree needs cultivation just as much as a hill of corn and will not flourish well without it.

THE GARDEN.—We feel bound constantly to urge upon the attention of our readers the importance of a good garden. Its influence is good every way. It spreads the table with palatable and nutrient food, and fills the dessert dishes with luxuries, and thus saves the cash which must otherwise be paid for beef, ham, veal and lamb; beside promoting health and spirits more than the meat would. Then a good garden is a civilizer. Whoever meditated crime in the midst of luxuriant vegetables and fragrant flowers? Its moral tendency is apparent—and so is that of the orchard. Read Hawthorne's reflections in the orchard, as described in "Mosses from an Old Manse." They beautify the home wonderfully and kindle emotions which never die out of the heart.

But we had almost forgotten the individual plants, and must hasten to say a word or two of

ASPARAGUS.—This is a delicious and easily cultivated vegetable, and Mr. CUTTER, of Pelham, has recently given you the best mode of growing it. What the old bed requires now is to cut off the last years stalks just below the ground and burn them; loosen the earth about the roots and clean up the whole bed. As the sweetness and tenderness of this plant depends upon its rapidity of growth the soil should be made very rich.

BEANS.—Should be planted as soon as you feel secure from frost. They are ornamental planted in hills two or more feet across with birch sticks stuck about the edge and tied together at the top.

Then there are peas, and beets of two or three kinds, parsnips, carrots, lettuce, radishes, cucumbers, rhubarb, pepper-grass, spinach, salsify, parsley, tomato, turnips, celery, early corn, melons, onions, early potatoes, summer squash, and cabbages, all affording the proper summer nutriment and requiring a similar soil for their production. Sow and cultivate well a few of each, and you will find your account in it.

SMALL FRUITS.—Set red and white raspberries, thimbleberries, black and white, also currants and gooseberries; they are cheap and wholesome food and as easily raised as potatoes. Any home will have charms for children where these are plentifully growing.

ORNAMENTAL.—Do not allow the lusty teams and the broad acres, the grass, the grain and the trees, to occupy all your time, but give a thought and an eye occasionally to the beautiful. Spread out a sunny space for the daughters, where the sun will cheerfully assist them with the spade. What a charming spot! Here, are the mixed balsams and carnations; the mignonette, mourning bride and columbine; there, love lies bleeding, and in the corner, love in a mist, the candytaft and cantebury bell. Why, you resume your youth

here—Time almost ceases to make his mark. Old scenes come thronging to the soul, such as when you sat on the rustic seat in the garden, and dissected flowers with her who is now the mother of these beautiful and happy daughters. Such are the influences of the flower garden. We need not go to the books for poetry, it is in nature every where, but especially in such a group as this,

"There's beauty all around our paths, if but our watchful eyes,
Can trace it midst familiar things, and thro' their lowly guise."

We insist upon it, that there is time with all to be given to the ornamental; it will make you richer, better, happier, more cheerful, and to die easier, and will have the same influences upon your family, by creating something of the beautiful, around you; and we aver that this is a portion of the proper and fitting *farm work* for the merry month of MAY.

BOOKS.

THE HIVE.—This is a beautiful little volume containing all the plain, general directions for the management of bees, with an account of their diseases, the remedies, &c., with numerous illustrations.

HORSES, their varieties, breeding, and management in health and disease, and enriched with illustrations.

DOMESTIC FOWL, and ornamental poultry—full of biddies, birds and their dwellings, with different modes of feeding, &c.

THE HOG, its origin and varieties, and treatment under disease.

These four books are prepared by H. D. RICHARDSON, Esq., and are written in a plain, concise style, rejecting speculations and theories almost entirely. They are printed and covered elegantly, and sold for 25 cents each. Here, then, for one dollar, you get about all the knowledge that can be derived from the books, of the hog, the horse, the honey bee and domestic poultry. They are published at New York by the farmer's publisher, O. M. SAXTON, and sold in this city by Messrs. Tappan & Whittemore.

¶ We have one or two suggestions to make in relation to these books. The first, and really an important improvement in them, would be to add to each an analytical index. If a book is worth printing, it is worth having an index—a table of contents is not sufficient. The second suggestion is, to print the title on the back of the book. This may run lengthwise, and add nothing to the cost, and will not only be convenient, but ornamental.

¶ The *Scientific American*, in our judgment, is among the most useful publications in the country. Its articles are of a most practical character, and written with conciseness and force. There is a "wouldn't flatter Neptune for his trident" air about it which we admire. We read it constantly, with profit and pleasure.

For the New England Farmer.

SWEET APPLES—GRAFTING.

No department of husbandry requires greater care and judgment than in the selection of the kinds of fruit intended for propagation either by grafting or by growing young trees. The difference between a wise choice and the opposite, is the difference between a good tree and one that is worthless. The reason that so many fruit trees, comparatively worthless, are still allowed to "cumber the ground," may be found, perhaps, in the fact, that we are apt to confine the comparison from which selections are made to limits altogether too narrow. Every neighborhood has its own special favorites. These, like most other local matters, obtain a factitious importance and value, not warranted by their intrinsic merits. Let a majority of our common farmers, who now rest satisfied with the varieties they have upon their farms, take up Downing's or Cole's Fruit Book, and we think they would at once extend their choice, and introduce new varieties from abroad.

Perhaps these remarks are applicable to one kind of apple, which has been noticed several times of late in the *Farmer*, and in a way, it seems to me, calculated to lead to the unpleasant disappointment of many. I refer to the Danvers Winter Sweet. By repeated notices in the papers, this apple has gained great notoriety, and has acquired a reputation altogether above its merits. As I happen to know something of this fruit, as it is under good cultivation, in various soils not twenty miles from its native place, I deem it a duty to counsel a degree of caution in regard to its cultivation. To the best of my knowledge and belief, this fruit has universally disappointed the expectation of cultivators in this vicinity. The tree is not a handsome grower, the fruit is inferior in size, apt to become spotted and to blight as it approaches maturity, flesh rather tough, of a dull sweet, inclined to bitter, and when kept late in the winter, becomes affected with the potato rot, the skin over the whole surface turning black so as to resemble that disease. We regard it as in no respect equal to some half dozen native varieties known here as the Morse Sweeting, Flat Sweeting, Green Sweeting, &c. There are other varieties, which I suppose are superior to any of these, such as the Orange and Ladies' Sweeting. In Worcester county, I hear of the Rockport Sweeting, concerning which I am unable to speak. I think, Mr. Editor, you would render the public a valuable service by giving a short list of the best winter sweetings. I hear constant inquiries for such a list. With my present knowledge, I should select from the following list:—

Orange Sweeting, (see Cole or Downing.)
Seaver " " "
Ladies' " " "
Leicester or Flat, (who can describe!)
Rockport Sweet, " "

I would invite the attention of the editor and his correspondents to this list, in the hope that it may be so "revised and enlarged" as to furnish something reliable.

The use of wax, instead of clay, in grafting, has become the general practice, and is found to answer ordinary purposes very well. But in grafting old trees, whose bark is rough and scaly, it will be found that clay is much better, and can be ap-

plied with greater facility. After setting the scions (as directed in the excellent article of N. P. M., March 20,) take some strips of cloth, and put in each clay enough for the purpose, roll it loosely in the cloth, and place in a basket. These can be taken out and applied, without bringing the hands in direct contact with the clay and thus avoid soiling them unpleasantly. A friend, of large experience in using wax, informs me that mutton tallow is better than beef. The wax made with it is less apt to crack and is less injurious to the tree. It is well to keep ready for use a quantity of grafting clay, as it is useful in case of accident in applying to the wounded parts of trees. B. F. S. G.

West Newbury, April 6, 1852.

REMARKS.—Fruits, as well as everything else, in these days of inquiry, are obliged to pass the ordeal of severe criticism. Free inquiry, and a free expression of opinion, if in the spirit of kindness and with a serious desire for improvement, will evolve the truth, and enable us to be pretty certain which are the best among the great variety of fruits now presented to us for cultivation.

For the New England Farmer.

A LARGE CALF.

MESSES. EDITORS:—Mr. B. F. DUDLEY, of Milton, Mass., has in his possession a beautifully marked, red and white bull calf, of the Ayrshire breed, which on last Saturday was six weeks old, and weighed two hundred and twenty-two pounds. His first weight at four days old, was one hundred and eighteen pounds, so that his average daily increase from that time till Saturday of last week was two and five-eighths pounds. During the last week, however, he gained at the rate of three pounds per day. His mother is a medium sized, handsome animal, also belonging to Mr. Dudley.

People in our neighborhood consider this calf an extraordinary specimen of his kind, but they may be perhaps mistaken, and if you or your readers should know of anything surpassing it, you would confer a favor by mentioning its whereabouts.

A SUBSCRIBER.

Milton, April 6, 1852.

HARMONY OF NATURE.

Some insects have no defence, except the diversity of their motion. When the notopoda or elater is laid upon its back, it uses a spring hidden in its breast, and, like a skilful jumper, it falls upon his feet; the butterfly escapes from the birds by its zig-zag flight; the spider runs away from its enemies by letting itself down its thread, like a sailor along a cable; the gyranus describes with rapidity circles on the crystal waters, and the tipula lightly execute their dances there without wetting their paws.

If we cast a passing glance upon the fishes, we must perceive that the fluid which surrounds them serves as a means of conveyance; aided by their fins, they travel through their domains with ease and comfort. Nature has provided them with a bladder filled with air, which they have power to empty and again to fill at pleasure; and thus they diminish or increase the weight and volume of their bodies as they rise or fall in the water.

It is generally known that some fishes, like

birds, are provided with an oily gland; with this, their scales are anointed with a substance which protects them from the relaxing effects of the water. But what is most surprising is, that this gland is placed on the head, in such a manner that the simple act of swimming causes the oil to slide over their bodies, and covers them completely. Without this admirable position, this gland would have been useless, as fishes have neither hands nor feet to anoint themselves with this oil.—*English paper.*

SCHOOL OF DESIGN FOR WOMEN.

He is but a poor observer of New England society, who has not become satisfied that the true idea of Republicanism is yet but half wrought out among us. *Man* has gained by putting off the empty forms of monarchy and aristocracy—gained in strength and manliness by the adoption of a form of government, which makes possible for him the highest places of honor and authority in the State—gained by fleeing from the odious and unjust preferences of the laws of entails and primogeniture. He has in the pursuits of politics, in the constant changes and easy acquisition of property, in the primeval forests of the West, in the mines of California, incitements to vigorous life, both mental and physical, never known to men of the old world. He is a freer, more fully developed, and *should be*, a better and happier man. But what has *woman* gained, by exchanging the old for the new world? In the mother country, a woman may be, and now is a queen, and many women hold rank and title in their own right. In America, royalty and rank and title do not exist. What has she *gained*? A better husband, it may be, and as a *wife*, in consequence, a better home and a higher and happier life. This *might be*, and would seem to follow, almost of course, did we not, every day, see how the very principles of equality, improving our general style of living, and increasing the labors of our households, at the same time are doing away servitude and servants, and bringing upon the wives and daughters, even of men of competent estate, additional burdens.

But of this we intend not now to speak. There are, and always must be, among us, women for whom no adequate support is provided by others; maidens young, and more advanced, who are looking fearfully into the future, or at the present, for an honorable means of an independent subsistence; wives who would gladly relieve their husbands, struggling with ill health or misfortune, of their support; widows with no help this side Heaven, dependent on their own efforts for bread for themselves and their little ones. Indeed, in the peculiar vicissitudes of American life, no woman can feel sure that she may not, at some time, be thrown upon her own resources for support, and no father can look upon the innocent face of his little daughter at his knee, without a shudder at

the dreadful alternatives presented to helpless woman, exposed at once to want and temptation.

A few positions, it is true, are already open, by which women may gain for themselves a support, but these are entirely inadequate to furnish respectable employment even to the few who are fitted to occupy them. In this view alone, had it no other aim or effect, we should regard an institution of the character named at the head of this article as a noble and benevolent scheme. Such an institution is now open in Boston, in Thorndike's Buildings, in Summer Street. It is known as "THE NEW ENGLAND SCHOOL OF DESIGN FOR WOMEN." Its objects are stated to be, "1. To educate a body of professed designers, capable of furnishing original designs for manufactures and other purposes, where ornamental designs are required. 2. To teach the various processes of Engraving, Lithography, and other methods of transferring and multiplying designs. 3. To educate a class of teachers in drawing and design."

We have recently had the pleasure of a visit to the school, which has now been in operation about six months. We found a pleasant, and apparently happy assemblage of about eighty pupils, none of whom are allowed to be under fifteen years of age, or compelled to be of any particular age above that, no *outside* limit being fixed by their regulations. Specimens of their drawings, which we were allowed to examine, indicated so remarkable a proficiency for the time during which the school has been taught, that we could not help suspecting, that the fair hands of the artists had been somewhat used to the pencil at an earlier date.

The "designs for manufactures" referred to above, will include designs for paper-hangings, carpets, calicos, and the like. The combination of *colors*, as well as *forms*, is to make part of the more advanced course.

Most of the designs for all our fabrics of the descriptions named are now furnished from Europe, and from the uncouth, unintelligible figures which haunt our vision on the walls and floors of our dwellings, as well as on the shawls and dresses of the ladies, one would infer that the aristocracy of taste had not been selected in the old country to preside over the labors of the designers. It frequently requires a violent exercise of the wits of a paper-hanger to discern *which side up* a figure looks best, and carpet-makers often are exceeding puzzled to ascertain what part of a breadth of carpeting matches its neighbor breadth. Many a nervous invalid has had his illness protracted for weeks by the agony he has endured in endeavoring to comprehend the meaning of the vague, wandering forms which adorn the (papered) walls of his chamber. Many a child has doubtless been frightened out of half his wits by the *accidental* diabolic faces which peer out from the paper-hang-

ings by moonlight. Then, there are the India shawls which fall in folds so gracefully from the drooping shoulders of our belles, adorned with that everlasting, unchanging *palm-leaf*, as we are informed it is, which, to our agricultural eye, suggests the idea of an ill-grown, crook-necked squash!

Manifestly, there is a demand for taste and talent and labor, refined taste, high talent and respectable and well compensated labor, in these departments. Let us have gracefulness and good taste manifest in all our surroundings. "Beauty is an emblem of inward good," and however philosophers may refine upon the principles of its operation to give us pleasure, we believe with the poet, that "a thing of beauty is a joy forever," and that he is a benefactor of his race, who contributes to the general stock of the beautiful, whether it be color or form or landscape—picture, statue, tree, or flower or lawn.

Institutions of this kind must tend in every way to promote correct taste, and true refinement, not only among the pupils who are thus rendered familiar with beautiful forms and combinations of color, not only among the friends whom they daily meet in social life, but as we have already suggested, throughout the whole community, where the products of their labor shall be mingled with the affairs of life.

Again, we like the plan for its truly republican tendency. In the school, as in our common schools for children, there is no distinction of rank. Nature's aristocracy of genius and true nobility of soul will have their first place there, as everywhere. The effect of an intercourse between females of all classes of society, associated for a common object on equal terms, is to awaken a sympathy powerful every way for good.

Such an institution tends to give dignity to labor, to make useful labor respectable. It has always been respectable among young ladies to perform *useless* labor, to spend months of the few precious years given them on earth, in *worsted work* and *embroidered kerchiefs*, but to aid the over-burdened mother in keeping the family wardrobe in order has been regarded as rather a low business. To practice music or drawing as a recreation, is regarded as evidence of being *accomplished*; but to teach those accomplishments for compensation, is too often felt to be more degrading than dependence and an aimless life. To correct these false impressions, to incite each to do her part in the business of life, to make it honorable to help "to bear one another's burdens," are among the legitimate results of such an institution.

The school is under the direction of an executive committee, composed of an equal number of ladies and gentlemen. Miss E. D. LITTLEHALE is Secretary, and conducts the correspondence. She is a lady whose light is steadily shining, and can-

not long be hid. We should be glad, did we feel at liberty, to repeat some things that Fame has told us of her labors of love, and of her devoted and self-sacrificing spirit.

We will only add, that we trust the generous philanthropy which has prompted this enterprise, will be enabled to sustain it, and perfect it into a permanent system.

Trials and embarrassments of all kinds are a part of the discipline of all who lead in any good work. The ridicule of the ignorant, the cautiousness of conservatism, the *hyper-sensibility* which fears lest womanhood should transcend its *proprieties*, and the carelessness and unsympathizing spirit of merely *worldly* men, are among the outward impediments of all such schemes. Differences of opinion, and want of knowledge as to the details of management among its directors and friends, the petty jealousies and animosities incident to poor human nature everywhere, will stand at times like lions in the way, to turn brave hearts from the paths of noble action.

From what we know of those who have charge of this school, we have confidence that they will be able to endure unto the end, and that they will have in addition to the consciousness that they are earnestly doing the will of their Master, the reward of success.

CURRENTS AND GOOSEBERRIES.

It is to be presumed that not one in a hundred understands the simple process of cultivating either currants or gooseberries, although it has been detailed in all the horticultural books with which the world abounds. Thousands of persons, with every appliance for success, are still content to live without a plentiful supply of these delicious, healthy, and cheap luxuries, merely because they have not thought of the matter. They have a few stunted bushes set in the grass, with three-fourths of the stocks dead, and then wonder why they do not bear in abundance.

There is not a more beautiful shrub growing than the currant, properly propagated; and the same may be said of the gooseberry. Cultivators who pay any attention to the subject, never allow the root to make but one stock, or, as the English say, "make them stand on one leg"—thus forming a beautiful miniature tree.

To do this you must take sprouts of last year's growth, and cut out all the eyes, or buds, in the wood, leaving only two or three at the top; then push them about half the length of the cutting into mellow ground; where they will root, and run up a single stock, forming a beautiful symmetrical head. If you wish it higher, cut the eyes out again the second year. I have one six feet high. This places your fruit out of the way of hens, and prevents the gooseberry from mildewing, which often happens when the fruit lies on or near the ground, and is shaded by a superabundance of leaves and sprouts. It changes an unsightly bush, which cumbers and disfigures your garden, into an ornamental dwarf tree. The fruit is larger, and ripens better, and will last on the bushes, by growing in perfection, until late in the fall.

The mass of people suppose that the roots make out from the lower buds. It is not so—they start from between the bark and wood, at the place where it was cut from the parent root.—*Vermont Chronicle*.

For the New England Farmer.

OSAGE ORANGE HEDGE.

BY LUTHER GILBERT.

MR. BROWN:—Sir—There has been some doubt as to the hardness of this plant for a hedge, in the vicinity of Boston, and as I think I have given it a fair trial, I will give you the result of my experience. It is the most beautiful and effectual hedge plant I ever saw. It will turn anything, from a chicken to cattle and horses, if well trimmed for a few years. It has a most beautiful green foliage, and sends out a thorn at every leaf that is as sharp as a needle. I have left with Messrs. Ruggles, Nourse, Mason & Co.'s very gentlemanly and attentive seedsmen, (Mr. Everett) a few of the shoots that grew last year; they are about 5 feet long, and I cut them off one foot above where they started last spring. It likes a deep, rich soil, but will grow in any common field soil. I have on my place about forty rods of it that has been set from one to two years, and don't think that a plant has been killed by the severity of the winter—with the exception of a few that have been thrown out of the ground by the frost.

In the spring of 1849, I bought the seed of Ruggles, Nourse, Mason & Co., and on the 28th of April I sowed it in rows, (after soaking it in warm water for 30 hours) 18 inches apart and from 2 to 3 inches apart in the row. It came up and grew one foot or more the first summer; the root running down about as long as the top, without many side roots. In the fall, after the frost had killed the leaves, I drew the earth up to them 5 or 6 inches high, and in the spring of 1850, when the earth got so as to work well, I set them out where I wanted my hedge, after cutting off one-half of the bottom of the root so as to make them send out side roots. I set them in double rows 6 inches apart and one foot apart in the rows—after they were set they were cut off to within one inch of the top of the ground; in the fall, I put some compost manure about the roots to keep them from getting thrown out by the frost.

In the spring of 1851, they were all cut back to within 3 inches of the ground and kept free from weeds all summer, and they grew very fast, as you will see by the shoots that I have spoken of above. When they are cut as I have described, they send out shoots in every direction. Last fall they did not have any protection, and I find them this spring all alive and looking well; where the soil was poor and shallow, some of them have been started up a little by the frost. But I think that may be remedied by drawing up the earth about their roots for one or two seasons. This spring, I shall cut them all back to within one foot of the ground, which will make the hedge very thick at the bottom. They grew so fast and so late, that the ends of the new wood does not get ripe, which dies, but not near so much of it as will be necessary to cut off. If it is not cut down when it is set out, it will make a very handsome tree and grow thirty or forty feet high. I have set out some for that purpose, which I expect to

see some very handsome oranges growing on in a few years.

Yours,
Grantville, April 9, 1852.

L. G.

CULTURE OF SWEET POTATOES.

Some two or three years ago a gentleman in Hinsdale, N. H., sent us a box of sweet potatoes in the spring, of his own raising, and in a letter stated that he was in the practice of raising them to considerable extent for his milch cows as well as for family use; that he found no difficulty in so doing, and considered them a profitable crop.

Sweet potatoes may be started by planting the small potatoes in a hot-bed, prepared as for other things. The potatoes are cut open lengthwise and laid the cut side down, and when the sprouts are up about an inch they are pulled off and transplanted as cabbage plants are. The other method is to procure the slips themselves and plant, which is much the easiest and cheapest way to those who have not the hot-beds, or do not wish to go through the former process. Some persons plant upon ridges, but we think that unnecessary in our usually dry, hot summers. The soil should be light, rich, and warm, a sandy loam being best for them. The vines run upon the ground, something like the cucumber, the leaves are deeply serrated, and their appearance in the garden is rather ornamental.

The slips ready for transplanting may be obtained of L. RAND & Co., No. 84, Faneuil Hall Market, Boston.

SPRING WEATHER.

Following in the train of the winter weather, the spring up to this time, April 17, has been cold and stormy in the extreme. A snow storm began at Philadelphia, on Sunday evening, the 11th, and on Monday it reached New England in great fury. The steamers in the Sound were detained and in imminent danger. One or two wrecks occurred on Cohasset Rocks, with dreadful fatality to life. Snow storms, and hail and rain storms, accompanied with high winds, have come thick and fast upon the heels of each other. To-day the sun shines brightly upon the snow drifts under the walls, and on the sparkling waters as they dance down the swollen brooks. Farm work will come in a heap—the boys won't nap much after daylight until the trees are set and the planting is done. But we shall have fine weather yet, and there is undoubtedly "a good time coming."

NORFOLK Co. AG. SOCIETY.—At the late annual meeting of this society, the elections were,

MARSHALL P. WILDER, *President*,
E. L. KEYES, *Corresponding Secretary*,
E. M. RICHARDS, *Treasurer*.

The Exhibition will be on the 28th and 29th September next.

TIMELY WORDS.

Cows—Carrots—Plowing, Deep or Shallow—No better field for ambition than Farming—What helps to make a good Editor—Wordsworth, and the influences of his Poetry.

The following extracts are from a private letter from our esteemed friend and associate, Mr. HOLBROOK. They are partly necessary as an explanation, and fit every way for the present moment.—His hints to ourself shall prompt new efforts, but can hardly increase our love of nature; it already amounts to an enthusiasm which requires the check rein and curb at each returning change of the seasons. Nature, to us, is

"The Living Page, whose every character
Delights and gives us wisdom."

That Mr. Holbrook is in favor of the carrot for stock, we have no doubt. In an article in the *Farmer* of April, 1850, he says, "The carrot gives a better return than almost any thing the farmer raises; as winter feed, it highly promotes the health and growth of calves, colts and store swine; cows fed upon it almost invariably do well at calving time, and afterwards give a full flow of milk, yielding the best of butter."

Our associate will excuse us, we trust, for the unceremonious appropriation we have made of his letter. There is a peculiar fitting and freshness in letters written in this off-hand manner, that often tempt us to use them, although not intended for publication.

Brattleboro', April 10, 1852.

S. BROWN, Esq.:—My Dear Sir,—I have just read Col. LINCOLN's communication on "Cows and Carrots." Perhaps the man does not live in whose judgment and sagacity in all agricultural matters I more fully confide than in Col. Lincoln's. I know him thoroughly, every way. Massachusetts has not a more sound, thorough, sensible, respectable and every way worthy man than the Colonel in all her borders. Two years ago, I think, this April, I spent a number of days at his place, investigated his system of *Irrigation*, accompanied him into Rhode Island to look at the system there practiced, and gave an article to the *Albany Cultivator* on the subject.

If the Colonel infers that I am unfriendly to the raising and feeding of carrots, he is quite mistaken. I raise and feed considerable quantities of them every year, and have repeatedly written in favor of growing and feeding the crop. On the naked question of the *direct* effect of carrots upon milch cows, I am of opinion that they do not directly increase the *quantity* of milk. But they are still very valuable for cows, because they promote a high state of health, strong digestion, and fine appetite, enabling the animal to consume, and digest, a large quantity of, and appropriate the milk-producing and nutritious properties of, hay. For brood mares, for colts, for all horses, for young cattle, for hogs, they are excellent.

Your correspondent, "C.," on "Plowing—Deep or Shallow," has, in the main, expressed himself correctly and well. I fear, however, that he too easily excuses *shallow* plowing. True, young farmers in debt for their land, and their soil poor and thin, cannot go down at once to nine or twelve inches. But the very best way to pay for their

farms speedily, and have land left that is worth something, is to plow deeper and deeper every rotation, accompanied with high manuring. I had this very subject on my mind for an article for you when I received the last *N. E. Farmer*. Perhaps I shall not now write upon it, as I might express opinions somewhat variant from "C.'s," though probably we might not differ in a conversation on the subject.

Judging from personal experience, I should say to young men that there is no better field for honorable usefulness, or if the person has ambition, there is no surer and quicker road to distinction, than scientific and practical farming, together with a judicious use of the pen upon agricultural subjects.

I am pleased to notice, from time to time, your sensibility to the influences of nature. Encourage this inclination, my dear sir, and study nature profoundly, if you would be an agricultural editor indeed—if you would be a *man*, every way. I presume you have read the poet Wordsworth, over and over again. I read his works more or less every spring; and can say, with truth, that they are calculated to quicken all the better tendencies of the heart, and to lead one to a closer communion with Nature.

Very truly, your friend,
F. HOLBROOK.

CHANGE OF GRAFTED FRUIT.

Some time ago we published a letter from Mr. JACOB B. FARMER, of Concord, in this State, in relation to a change in grafted fruit, which he described. Dr. HOLMES, editor of the *Maine Farmer*, and, by the way, one of the best agricultural papers in the country, has noticed Mr. Farmer's statement, and makes the following remarks in relation to a similar occurrence.

CHANGE OF GRAFTED FRUIT.—Does the original stock or tree into which a graft is put ever overcome the graft? We believe there are well authenticated instances where this has taken place. A few years ago we gave an account of an instance of the kind which Mr. Thomas C. Wood, of Winthrop, related to us as having taken place in his orchard. A graft had borne for several years the true fruit of the graft. The fruit, however, began to change, and in a few years the graft bore an apple nearly or quite resembling that which the tree bore before being engrafted. Mr. W. attributed the change to the wood of the stock somehow gaining the ascendancy over the graft. Some of our cotemporaries pronounced the whole a "fish story," or at any rate a mistake.

NEW VARIETY OF POTATO.—A bulb of the potato species, which was found growing indigenously in Mexico, was brought to this country some years since, by a gentleman who returned from that country after the war. Several specimens were given to Mr. Andrew Hale, of Alloway, Wayne county, who planted them, and after four years cultivation, has produced a crop that equals in appearance the best approved potatoes. It is of small size, long and not large, resembling the "white Mercer," pretty closely,—with smooth skin, light complexion, and without the deep indentation called "eyes," by which great loss is suffered in many kinds.—*Rochester Democrat*.

For the New England Farmer.

WHAT KILLS THE PEACH BUDS?

BY H. F. FRENCH.

MY DEAR BROWN:—Mr. Downing, and many others of our best horticulturists, say, that when the thermometer falls lower than about 12° Fahrenheit, the peach buds are generally destroyed, and that, too, as I understand it, by the mere stress of weather, the mere intensity of cold. I have always looked upon this idea with suspicion, because it has seemed inexplicable to me, that any change should occur by any greater degree of cold, if the buds are not affected when the mercury is at zero. Water freezes at 32°, and the sap in the small twigs of the peach tree, I suppose must be frozen, long before the weather is at zero. We all know that water as it becomes solid, expands by crystallization, and we can readily comprehend that such expansion may rupture the sap-vessels of the wood or bud, and so destroy it. If this is the cause of the destruction of the buds, then it *should* happen whenever the sap freezes. Now I will not undertake to affirm that the sap in the peach *does* freeze until the thermometer reaches 12° below. It is possible that there is in the sap of the peach and in the incomprehensible phenomena of its circulation, a power of resistance to cold, sufficient for its protection to that degree. I speak cautiously on the subject, because there is no theory of the circulation of sap, which is perfectly consistent with known facts, and I set the subject down among the matters not fully revealed. The circulation of the blood of animals generates heat in some way, and possibly the circulation of the sap in plants may do the same. But generally, this does not seem to be so, for all of us who have split cordwood in the winter, know that in weather not so severe as we speak of, the logs appear to be frozen solid, and will fly open at the blow of the axe, like blocks of ice, and show the frozen sap, sparkling like diamonds.

After the sap has become solid, does it undergo any change by the increased intensity of cold? If not, *how* is it supposed, that a degree of cold 12° below zero kills the buds, when 5° below does not? Although there seems to be a good deal of evidence that Mr. Downing and his friends are correct as to the fact, in the more southern latitudes, yet it is otherwise at the North.

Within the past fortnight, I have examined the peach buds on many farms in the eastern part of New Hampshire. My own, and those of most of my neighbors, on the sandy plain, are all destroyed. We had the thermometer 20° below.

At Stratham, on several farms, they are nearly all destroyed, and on others most of them are injured. The degree of cold was more than 12° below at all those places, and I can discover no reason for the difference.

I was at Derry, at the nursery of Samuel Wilson, yesterday, and examined a great many peach trees, and they are perfectly sound and fresh, except upon one or two varieties of tender trees, which Mr. Wilson said, usually suffer. His thermometer *he* saw 18° below, and others near went as low as 22° below, and his peach trees within two rods of where the glass was kept, are full of fresh sound blossom buds. He has trees on the south side of his house, in warm exposures; others on the north side of hills, and others on the hill tops, and they are uninjured, with very slight

exceptions. Mr. Wilson is known as perfectly reliable, and assures me that his peach crop has never failed in any instance for many years, and the cold is generally greater than 12° below, every winter. His opinion is, that the buds are destroyed, usually in autumn, by sudden cold weather upon trees on moist or rich land, where they grow late in the season. With no theory of my own to advocate, I am desirous to keep our readers posted up as to the facts, that by-and-by we may be able to draw the truth out of the well, in which the old proverb truly says, she lies.

Yours truly,

H. F. F.

DISSOLVING BONES IN ASHES.

We give a plain, simple rule, suited to any farmer who is disposed to save and use one of the best fertilizers within his reach which is now almost universally wasted.

Procure a stout earthen jar, of about thirty gallons capacity, and a demijohn of sulphuric acid, commonly called oil of vitrol. Now gather, or save all the bones within your reach, until you have 100 pounds, which will dissolve easier the finer they are broken. Put these in the jar and moisten them with water for a day or two. Now dilute fifty pounds of acid with two or three times its bulk of water and pour one-third of it upon the bones. Stir them frequently, and on the morrow add another third of the acid and water. Stir them well, and if not dissolved sufficiently on the next day, add the remainder of the liquid. As soon as the bones are reduced, mix charcoal dust, dry peat, saw dust, loamy earth, or if for immediate use, ashes or lime may be used as a dryer, until the whole is in the form of powder, convenient for sowing by hand or drilling machine. You may apply this at the rate of three to ten bushels of the bones to the acre, sown broadcast and lightly plowed or harrowed in, so that the earth will absorb the gaseous portions of the gelatine of the bones, which is of great value, independent of the phosphate of lime; a substance greatly needed upon all the cultivated fields and pastures of all the old States of the Union.

Instead of a jar, for dissolving the bones, you may use a tub, or an iron kettle, but they will soon be destroyed by the action of the acid. Upon a large scale, the best way is to have a tight stone floor, upon which, build a ring of moistened clay or loam, as is often done in slacking lime or mixing mortar. Within this place put the bones, and wet with the acid as before directed, and when ready for mixing with earth, rake in the ring and stir all up together, adding as much substance as may be necessary, or you may dilute the dissolved bones until you can spread the whole as liquid manure, which is an admirable plan for all grass lands. The purchase of the acid is not a loss, being itself a valuable fertilizer. Bones may also be dissolved by boiling in strong ley and then mixed with dryers, and sown; or put in the compost heaps with plenty of peat earth, they will cause to ferment and become exceedingly valuable. Bones are now almost universally wasted by every farmer, because he does not know how to prepare them so as to avail himself of their great value. Let him follow this short, simple direction, and it will be worth more than we charge for a thousand copies of the paper, in which we are constantly giving him such valuable information.—*The Plow*.

A JUST REBUKE.

Every friend of an improved mode of cultivation will feel obliged to Dr. GARDNER, who presided at the last agricultural meeting at the State House, for his timely rebuke to those persons who are ever crying out that there is nothing good in them. One of our wise Senators undertook to denounce them in the Senate as useless, because one speaker expressed one opinion, and another a different one. What in the name of common sense do we meet there for, but to express our experiences and observation, and to gather from them all for our own use, those modes which commend themselves to our judgment? If we knew that all held the same opinions, there would be no need of comparison, and there would be no improvement.

Was there no difference in the mode of constructing the steam engine, the paddle wheel, the cotton mill, the plow, harrow, and many other implements? Some people are never satisfied. The world either goes too fast or too slow for them; at any rate, it don't go in their path, and they go grumbling along and nudging other people off the track, even though they don't wish to travel on it themselves.

We say, unhesitatingly, that the farmer's meetings are useful. They have awakened a new spirit all over the State, and will not only result in an increase of material crops, but in the social feeling and regard for each other, which is promoted by our citizens coming into contact with each other from the various parts of the commonwealth.

For the New England Farmer.

IMPROVEMENT IN TYING UP CATTLE.

MR. EDITOR:—A good deal of time is consumed in winter in "taking care of the cattle." It is not a small job to "turn out" and "tie up" a score or two of animals, where bows or chains are used. Good farmers, who have tried other ways, maintain that the *stanchion* fastenings are the best. This method admits of great economy of barn room, as the space all clear before the cattle adds to the width and convenience of the barn floor in summer, when not needed for the herd. Where cows are fed with cut feed or meal, that part of the floor from which they eat can be cleansed off with great expedition. It must be apparent to every one, that a man with a pitchfork can feed forty cattle in a short time, when there is such a chance to shake the hay right along by the side of the floorway under their noses.

But my object in this communication is, to direct attention to the saving of time and labor which the use of stanchions allows. In no other way can you stand behind your cattle and secure all in the stable at once.

This may be done in the following manner: Get a strip of iron, one inch and a half wide, A, and attach it to the movable stanchions, B B B. This should be by half inch bolts of round iron with spring keys. A rope may be fastened to the end, C, and passing over a fixed pulley near, may be brought down and attached to a lever, or to a shaft with a crank and follower.

Every one knows, who has had the charge of cattle, that they very soon know their places. They will put their heads into the stanchions more promptly if coaxed by a little hay on the floor. Now suppose your barn to be thus arranged: You push back your sliding doors and thirty cattle come in. They go to their places, put their heads through, and you give your little crank a turn—they are all fastened! Is not this better than crowding between them when they are all wet sometimes, and the more you dig into their stubborn sides with your elbows, and cry "stand round," with clenched teeth, the more they wont do it?

I can almost hear some skeptical reader say that "they wont all go in."

Well, in that case you can slip out a key and a bolt, and get in the stragglers at your leisure. If you want to leave any animals in-doors, you can disconnect their stanchions and have separate pins.

Many stocks of cattle that are only watered once a day, might be turned out from such stanchions twice, if desired.

Hoping that these suggestions may be useful to your readers, I remain,

Yours,

WM. D. BROWN.

Concord, Mass., Jan. 23.

☞ In the town of West Newbury, in this State, here were raised and put up of marketable apples, last year, fourteen thousand and nine barrels.

TENTH AGRICULTURAL MEETING,

AT THE STATE HOUSE, MARCH 23, 1852.

SUBJECT,—*Draining, and the Improvement of Meadow and Swamp Lands.*

Owing to indisposition, Hon. MYRON LAWRENCE was unable to preside at the meeting on Tuesday night, and the chair was occupied by Hon. Mr. GARDNER, of Seekonk. On taking the chair he made a few remarks in regard to what has been alleged by some persons, that these meetings do not do much good; because different persons here express different opinions in regard to the same subject. He thought there should be no more of an objection against these meetings, and the object they have in view, than a diversity of opinion upon law, theology or medicine is against those professions. In regard to the subject before the meeting, he considered it one of the most important departments of agriculture. It is practised more in England and Scotland than in this country. There the climate is more humid, and the soil consequently possesses more moisture. The gentlemen who own the land, are also generally better able to drain their land than our farmers are, and thus make it more remunerative. If we can credit the statement made by COLEMAN, there are in England thousands of acres of land which have been drained in the most thorough and scientific manner, and at great expense, and yet they have proved highly profitable. In Massachusetts, he did not suppose that it is practicable for our farmers to drain all their waste land to advantage. But there is a great amount of land in our commonwealth now lying entirely useless, not worth a dollar an acre, which by a proper system of draining and cultivation, and at much less cost than is generally supposed, might be made more productive than any land in the State. It is therefore plain that this subject is one of much importance to the farmer. Draining is also important in its results upon the health of those who live in the vicinity of low, wet land. In these low localities, typhus and intermittent fevers abound, which are caused in a great degree by these low marshy lands. The modes of draining are various. Superficial draining will in some localities do well. He had a lot of 8 or 10 acres, bounded on the east by a range of hills, and inclining to the west, at about an angle of 45 degrees; at the bottom of the lot there was a never failing spring, the water from which inundated a portion of the lot. Five or six years ago, he had a drain dug transversely towards the west, down to the hard bottom. Besides this he made lateral drains each way. In September it was dry enough to plow and harrow, which was done. A coat of compost, 25 to 30 loads to the acre, was next harrowed in, and in the fall it was sowed down to timothy, and since then it has been among his best land, producing more than two tons of good hay to the acre. This was accomplished with nothing

but superficial draining. He did not mention this as the best kind of draining, but as a kind which might be practised profitably. He thought that our bog meadows, properly reclaimed, might be made more valuable than the placers of California.

Mr. B. V. FRENCH, of Braintree, next addressed the meeting. He spoke of the importance of the subject, and mentioned several of the modes which are practised. Judge Buel, of Albany, took some very poor land, and laid down common white pine logs, with the butts up stream. Many years after, the drains were examined, and found to be discharging the water very well. Another mode is by placing pointed stones, and laying a rail on the top, and then fitting in with small stones. Others, where they have a large quantity of small stone, dig a trench, deep, and fill in with the small stone, and build on them their walls—thus getting rid of their small stone and laying a good foundation for their wall at the same time. But on the whole, he thought the best mode was to use the tiles made at Albany, and which are similar to those used in England. They can be obtained at \$12 a thousand. They are cut into lengths (when baked) of about fourteen inches, and cost here two cents a foot. He had found this to be the cheapest kind of drain which he could make. He alluded to the great importance attached to draining in England, as is apparent from the fact that Parliament has appropriated large sums to promote it. In regard to cedar swamps—he had inquired of those used to working cedar at what age it was suitable to work; and their opinion was, that it should be one hundred years old. He would ask what this land was worth for the product of which the owner must wait a hundred years, and in the mean time pay the annual taxes upon it? It was not worth, at the most, more than one dollar an acre. It would be found that these swamps are most always contiguous to a pine plain, with a gravelly soil. Sometimes a well could be dug here into which the water would run from the swamp. He thought the water could be drained from these swamps, the stumps removed, and the land made fit for the plow, for from \$40 to \$60 an acre; and when this had been thoroughly done, he had not heard of any which was not thought worth \$300 an acre. In order to make these lands good grass lands, some sand or ashes is needed. They will yield immense crops, Coleman says, in some instances five tons to the acre. They are good for celery, cabbage, turnips, and corn can be raised in some instances, with success.

Maj. WHEELER, of Framingham, spoke of his experience in draining. He began thirty-five years ago, and was ridiculed by his neighbors for it. The first thing important to be done, was to drain the land thoroughly, and to seed it down completely. He had tried many experiments; one which was successful, was to pare the land, pile up the

alices and when dry, burn them. This remedied, the need of the application of manure—the ashes supplying its place. He had got good crops in this way. Another mode he had practiced, was to spread on singly a coating of gravel. This he had done thirty-five years ago, and for thirty years he had got a good crop with nothing but a light dressing of compost every alternate year. These lands are valuable for feed for cattle, in dry seasons, when uplands fail. It used to be thought also necessary, to have a large supply of meadow hay to carry our stock through; but the opinion is now more prevalent, that it is better to reclaim our meadows and raise good English hay for our stock. Draining uplands he did not consider so important in this country as in England. He would dig his drains two feet wide, and two or three deep; put in the loose stones, and then fill in turfs with the soil on top. This would be found an easy way to get rid of the stones. He coincided in the belief, that land thus reclaimed is among the most valuable of any in our State.

Mr. POMEROY, from the western part of the State, said it was noticeable, that most every farmer in the State has some low muck land, and that in almost every case this land can be drained. These low lands are better adapted to grass than anything else; but he and some of his neighbors had practiced raising potatoes upon them with good success; the mode was as follows. They dig a ditch round the outside of their piece of land, and run up ditches to the cold spring in the centre, if there are such. If it is then not fit to be plowed, they go on to it with Irishmen and rip it up with hooks. It is then thrown up into ridges, on the top of which they plant potatoes as early as they can, manured with plaster. The Chenangoes, which had been the worst to rot in other lands, had been raised in this way without decaying at all; they were planted quite early. The next year these ridges are levelled down, and the piece sowed with grass seed, and with a very little manure a good crop of grass can be obtained, and the land will be in a good condition. Then if it did not pay in dollars and cents, it would pay in the good feeling which the farmer will experience in seeing what was formerly an old swamp—an eye sore upon the farm—converted into a fine level, beautiful piece of grass land. He approved of deep draining, and thought many cases of failure might be traced to shallow draining. The land will settle in the centre, and in time will go as low as the bottom of the drain—unless it is dug quite deep.

Mr. Brooks, of Princeton, did not doubt the advantage of draining upon wet lands, but he said, the question is, as to the manner, depth, and distance apart of the drains. The difficulty with the open drains is that they fill up, by the bottom rising up. The best tiles for drains are the tube

tiles; they will not fill up. In regard to the depth—in Northern New York he believed thirty inches was considered sufficient. This he did not think deep enough to produce the maximum effect of draining, which he considered to be to warm the land. The water tubes should be so low as not to be reached by evaporation. In regard to the expense, he believed that as a general rule, draining would not be found very profitable. In many instances it would be better for a man to buy another farm than to spend a large sum of money in draining, especially while land is so cheap as it is now. He did not doubt the effect of draining and loosening the earth to produce large crops.

Hon. Mr. HUBBARD, of Sunderland, rose to inquire of Mr. French in regard to the kind of tile he used.

Mr. FRENCH replied that it was the pipe or tube tile. They can be procured at Albany, at \$3.50 per one thousand feet. They are preferable to the horse shoe tile, as having a bottom to them, they do not sink.

Mr. HUBBARD said that a manufactory for supplying these tile had been established at Deerfield, in this State, where they are made and sold rather cheaper than at Albany. In regard to the subject of draining, he considered it very important. He spoke of the extent of unproductive land in our State, and the vast population it might sustain if reclaimed. Agricultural products are every year rising in value, and therefore, he argued, farmers are able to expend more in reclaiming their waste land. He had known land which had produced absolutely nothing of value, to be made worth from \$100 to \$200 an acre, by draining, at not half that cost. When once properly drained, it becomes the most permanent productive land we have, requiring but little manure compared with uplands. We need, he said, this muck land for the purpose of reclaiming our uplands. In the former we have a large amount of vegetable and animal matter, which is beneficial to be applied to the latter. In regard to the manner of draining, he thought one error was to dig through the centre of the land to be drained, and expect the water to flow to the drain from each direction. It is a better mode to dig round the lot, and then run drains to the springs in the centre, if necessary. Some complaint is made that crops cannot be obtained from these lands. The application of sand will remedy this evil. It supplies an ingredient which is wanted for the culture of grain, and at the same time warms the land.

Mr. HOWARD, of Boston, next spoke and confirmed what Mr. French had said respecting Judge Buel's experiments. The material now chiefly used in New York, is pipe tile. Seneca County, in New York, is most remarkable for its thorough draining. He related the experience of Mr. Johnson, a Scotchman, who was the first to introduce

it there, and who had laid some fifteen miles of these pipe drains on his farm, and is still putting down some 1000 to 1500 feet a year. It costs him, he estimates, 28 cents a rod, and he thinks he makes no investment on his farm which pays so well as this. Stiff, tenacious soils, become less compact, and more open and friable, by being drained; under heavy rains they do not run together, and form mortar, as before, which prevents their baking under drought. Another benefit is, that crops will not winter-kill on this land as they will on many others.

For the New England Farmer.

IS LIME A FERTILIZER?

BY R. B. HUBBARD.

To decide this question, we must first fix the definition of *fertilizer*.

In Webster, I find the following definitions:—"Fertilize, to enrich, to supply with the *pabulum* of plants, to make fruitful or productive." "*Manure*, any matter which *fertilizes* land." "*To manure*, to apply to land any *fertilizing* matter, as dung, compost, ashes, *lime*, fish, &c."

If the lexicographer is admitted as good authority in agricultural chemistry, the question is settled. To *fertilize* is to supply the food of plants. To *manure* is to *fertilize*; and fertility is produced by furnishing the soil with vegetable, animal and earthy *pabulum*, or food, such as dung, *lime* and fish. Therefore *lime* is a fertilizer.

But the editor of the *Ploughman*, who seems to have a vocabulary of his own, and to have studiously expunged from it every *scientific* term, even for common things, denies that *lime* is a fertilizer, in any sense of the term. He goes further, and asserts that *lime* has no more *fertilizing* properties than sand.

Now, Mr. Editor, while I join issue with the *Ploughman*, in his major premise, I most cheerfully concede the minor. I admit that *lime* is no more a fertilizer than sand. But I maintain that both *lime* and sand are fertilizers,—that they are indispensable to the growth and maturity of a very large portion of the products of the soil.

By analysis the following facts have been established:—

In burning 1000 lbs. of wheat,	11.77 lbs. of ashes are left.
Do. do. do. straw,	35.18 lbs. are left.
Of these ashes, from the wheat,	.96 lbs. is lime.
Do. do. do. straw,	4.00 lbs. is silica.
Do. do. do. straw,	2.40 lbs. is lime.
Do. do. do. straw,	33.70 lbs. is silica.
In 1000 lbs. of barley,	23½ lbs. of ashes are left.
Do. do. straw,	52.42 lbs. ashes are left.
In the former,	1.06 lbs. is lime, and 11.82 lbs. is silica.
In the latter,	5.54 lbs. is lime, and 38.56 lbs. is silica.
In 1000 lbs. of oats,	36 lbs. of ashes are left.
Do. oat straw,	57½ lbs. of ashes are left.
In the former,	0.86 lbs. is lime, and 19.76 lbs. is silica.
In the latter,	1.52 lbs. is lime, and 45.88 lbs. is silica.
In 1000 lbs. of red clover,	there is of lime 27.80 lbs., of silica 3.61 lbs.
In 1000 lbs. of white clover,	there is 23.48 lbs. of lime, and 14.73 of silica.

From this analysis it appears that both *lime* and sand enter somewhat largely into the composition of grains and grasses. And it can easily be shown that they are indispensable ingredients; that the stalk of corn could no more stand erect, without *silex*, than the bones of the animal frame could

sustain the weight imposed upon them without *lime*.

Admit, what cannot and will not be denied, that these inorganic substances are indispensable to the growth and health of the plant; and does it not follow, that they constitute a portion of the food, the *pabulum* of the plant? Now we have the best of authority for saying that to *fertilize* is to furnish food for plants.

The hair of animals contains iron. This metal is indispensable to the growth of hair. I would not recommend to a hungry man to make a supper of iron filings; yet it cannot be denied, that, so far as iron is necessary to the proper development of this animal product, it is a nutriment,—it is to the animal what *lime* is to the vegetable.

The same is true of the bones. Without phosphorus and *lime* there could be no bones. The disease called the rickets is supposed to proceed from a deficiency in the food of the proper ingredients of bone, or from some defect in the organs of assimilation.

Now are not the bones a part of the animal frame, as well as the muscles? And is not an essential ingredient, of the former, nutriment, as well as an ingredient of the latter? The milk which the infant draws from its mother's breast, contains *lime* and phosphorus, which enter into the composition of the bones,—iron for the hair, and carbon, nitrogen and hydrogen for the muscles. It would be manifestly unphilosophical to say that a part of these ingredients are nutritious, and a part not.

In nature's alembic a compound has been prepared of such simples, and such only, as are essential to the healthy growth and development of the whole animal frame. This compound we denominate nutriment, and each and every one of the simples nutritious.

So in the vegetable kingdom. As *lime* and sand enter into the composition of plants, and are essential to their healthy growth, we feel warranted in affirming that they constitute a part of the nutriment of plants,—that they are fertilizers.

If by analysis it be found that there is a deficiency of *lime* in the soil, when you would sow wheat, rye, oats, clover, or any other crop in the ashes of which *lime* is found, you must supply the deficiency by sowing carbonate or sulphate or phosphate of *lime*.

When clay superabounds, sand is the best manure.

The same is true of all the ingredients of plants. The secret of skilful farming consists in finding out what the soil needs, and in supplying the same economically, or, in *fertilizing* the soil, if need be, with sand.

R. B. H.

GRASS SEED.

In the warehouse of Messrs. Ruggles, Nourse, Mason & Co., we have examined some herds' grass seed which surpasses any that we have ever seen before in its cleanliness and perfection of development. Under a magnifier not a foul seed or bit of chaff can be noticed; and the seeds have a brightness as though varnished. The crop was raised by some English and Scotch emigrants on some of the finest timber lands in New Brunswick. The only weed they found there the first two years was a bunch of Canada thistles, on a spot where a

family of Indians had once camped—these they pulled up and carefully burned on the cottage hearth. The trees of all kinds were cut down and the seed mentioned were produced on stems four to five feet in height, which grew on this virgin soil. It is pleasant to notice this degree of perfection in one of our most important crops.

For the New England Farmer.

COWS AND CARROTS.

BY JOHN W. LINCOLN.

GENTLEMEN:—I experienced no little surprise and regret occasioned by the perusal of a communication addressed to you, written by J. G. Hoyt, under the above head, and published in the February No. of the *New England Farmer*, in which he states the opinion of a large milk farmer of Bradford, *"that carrots do not contribute in the slightest degree to increase the amount of milk in a cow!"* that his informant maintains, *"that while the quality of milk may be improved by carrots, the quantity is not perceptibly affected."* He thinks that *"the carrots, when fed out in ordinary doses, do not diminish in the least the quantity of hay necessary for his cows; but that they serve merely as condiments."* That *"he is decidedly of the opinion that \$3 is quite as much as a man can afford to pay for carrots to tickle the palate of a pet cow."* You may judge, sirs, how much I differ in opinion from the Bradford farmer, when I inform you that for several years past, in addition to the quantity I have raised on my own land, I have purchased the surplus carrots of my neighbors, amounting to several tons each year, and paid for them \$9 per ton delivered at my barn, and have then and now do believe that I paid no more than their value, not to tickle the palate of a pet cow, but to feed out to my stock. I was disposed to inquire whether it was possible I should be so greatly mistaken in my estimate of the intrinsic value of carrots. I was aware that in the table of Rham of the relative value of different vegetable substances as compared with good hay, carrots were not placed so high as by me; so also in the table of Boussingault, which has the approbation of Professor Johnston in his *Agricultural Chemistry*, but this was in the production of muscle. I knew that the books were full of commendations of the culture of carrots for stock generally, but particularly for horses, without one word of discouragement, so far as I have knowledge. I had full evidence that carrots were good food for swine. For several years past I have kept my swine principally on carrots through the winter months; they have been boiled, a small quantity of cob and corn meal added, and with the slops of the house, have been the only food of my swine; deprive them of the carrots, and the remainder of their food would have been insufficient to sustain life. My winter stock of swine has usually consisted of breeding sows, and they have uniformly been in such condition, that I was entirely willing that my piggery should be visited by any one disposed to inspect it, or its tenants. The usual observation has been, that *"those swine are too fat, to do well in having pigs."* I formerly kept my swine on potatoes, as I now do on carrots, and they have never done better than of late years.

That carrots contain much nutriment I cannot have a doubt, sufficient as I apprehend to induce farmers to grow them in considerable quantities for the benefit of their stock; that *"when fed out in ordinary doses"* they may so far improve the health of the animal, as to enable it more completely to digest their hay, by which to add to the covering of the ribs and the secretions of the milk vessels. That either your Bradford friend or myself was greatly in an error was most manifest. After carefully recalling to recollection what I had been able to obtain from books on this subject, my own experience, and that of others so far as it had come within my own observation, without discovering the fallacy of my former views, I was induced to inquire whether the opinions of the Bradford farmer were correct, although expressed with much confidence, and partially confirmed by the approval of two of the editors of your valuable publication, in whose agricultural knowledge the public have placed so much reliance, that it seems much like presumption to express a doubt. I was desirous of further evidence; I read the communication to Mr. Hawes, who has the immediate supervision of my farm, and requested him to take two cows then giving milk, as much alike as he could find them, ascertain what quantity of hay they were then eating, continue to them the same quantity of hay, but add to one of them a peck of carrots per day—that after a trial of a week to change the carrots to the other cow, to watch the effect carefully, and to report to me the result. He informs me that the milk of the cow eating carrots was increased one quart or more each day, on no day less than a quart, and on some days a little more; that the cow having hay alone, constantly eat up her whole allowance, and the one having carrots uniformly failed to do so, and this was the case with both cows while having the carrots—that each cow, when deprived of the carrots, at the close of each trial, fell off in her milk below the quantity given at the commencement, occasioned probably by their becoming dry preparatory to having their next calf, which is expected with both, about the first days of June next.

Having thus obtained the testimony of two witnesses that the use of carrots will not only tickle the palate of a pet cow, but if administered in ordinary doses will increase the quantity of milk, and diminish the quantity of hay necessary for food, whose competency to testify on this subject, will not be questioned, I will here rest the case, repeating that I have much regretted the publication, in the apprehension, that it might have the tendency of deterring many from growing root crops for the winter food of their stock.

This difference of opinion furnishes evidence of the importance to the farmers of Massachusetts of having a school and farm where all similar practical questions can be settled under the direction of a Board of Agriculture, to be established, as it is hoped, by the present Legislature.

Respectfully your most obedient servant,
Worcester, Feb. 17, 1852. J. W. L.

REMARKS.—We are under special obligations to Col. LINCOLN for the pains-taking experiment which he has instituted, and for the opportunity he has afforded us of spreading the results broad-cast through the land. We still have great confidence

in carrots, and as we have, perhaps, not been fully understood, shall refer to the subject again. We will merely say now, that we regard Col. LINCOLN as one of the most careful and successful farmers in the State—a gentleman who is ever ready to advance the interests of this most delightful branch of industry, either with his hands, purse or pen; who strives to promote it as a science, yet looks at each new development with a scrutinizing eye, so that no false doctrines may be engrafted upon the system which he adopts in cultivating the soil.

For the New England Farmer.

INQUIRIES.

MR. BROWN:—Will you or some of your correspondents answer a few questions through your valuable paper.

(a) Is Guano profitable here, where freight costs 32 cts. per cwt. from Boston, and manure is worth \$3.00 per cord?

(b) How much is required per acre for corn or wheat, and how is it best applied to each?

(c) Is it superior to common manure for root crops?

(d) Are the succeeding crops as much benefited by it as by common manure?

(e) Is the Mexican, advertised in your paper, as good as the Peruvian, according to the price?

By answering the above questions, you will confer a favor on

AN INQUIRER.

Pittsfield, N. H.

REMARKS.—(a) No: use manure instead.

(b) As much as you can afford. A neighbor of ours applied 300 pounds of guano with 1500 pounds of plaster, ten bushels of ashes and three ox cart loads of old finely pulverized meadow mud. This was intimately mingled on the barn floor. In twenty-four hours it had heated a little, and was then applied, a table spoonful to each hill for corn. The earth was pushed over the mixture with the foot before dropping the corn upon it. The ground had been moderately manured—which was plowed in. This mixture was applied to eleven acres of rather light land, and the produce was 900 bushels of good sound ears of corn to the eleven acres; making, probably, forty to forty-five bushels of shelled corn to the acre. Guano should always be intimately mingled with loam, or swamp mud, and then applied if possible in moist weather. Applied to wheat, mix as above. Sow broad cast and plow in shallow.

(c) No: nothing is superior to good composted manure for any crop, until we are better acquainted with the component parts of both soil and manure.

(d) We think not.

(e) The Mexican guano is said to contain more of the phosphates and less ammonia than the Peruvian. If your land lacks phosphates the Mexican is best. If your cows are in the habit of chewing all the old bones they can come at, it

would be one evidence that the Mexican would be the best for you.

For the New England Farmer.

NURSERY AND TRANSPLANTING.

BY A. G. SHELDON.

Were I about to select a piece of land for a nursery, I should choose a sandy loam that is free from stones. I would be careful that there should be no hollows where water would stand and ice freeze in the winter. It will be found convenient in cultivating the trees to have the land perfectly free from stones. I think it well to have the rows from 4 to 5 feet wide. This gives good room to take up the trees in one row without injuring the roots of the others. When the trees become big enough to inoculate and at the time of inoculating, it is well to cover the ground with meadow grass. This preserves the moisture in the earth, and if the weather should prove dry, as it often does in the month of August, the buds will be much more likely to live. In wet, misty weather, sift ashes on to nursery trees—this helps to preserve their health. One, two, and three years' growth from the bud is the right time to transplant the trees. In taking the trees from the nursery, always be sure that the spade is sharp, to cut the roots smooth. Be sure that you cut off the tap-root under the tree, lest you should strain the tree in pulling it up. Trees should be taken up early in the spring. If your ground is not dry enough for setting out your trees, cover up the roots with earth in a cool place where the sun will not shine on the tops; let them remain until the land is fit to receive them. When you set them out dig the hole broad enough to receive the roots at the whole-length in the same direction from the trunk that they had naturally grown, and set them as near as possible the same depth that they grew in the nursery. Fine pulverized soil from the garden or from the corn hills well warmed by the sun is good to sift in among the roots. After the tree is set out, it is well to lay some flat stones around them; this will keep down the roots and steady the bodies in the wind much better than staking. If the season should prove dry, put about the trees some hay or straw by the last of June or first of July; let this remain till the first of October, then remove it for fear of mice, and put about the body of the tree compost manure. In the spring, spread this out as far as the end of the roots. If you can keep the whole of the ground plowed in the young orchard it is well; if you cannot, never let the grass grow anywhere within the length of the roots of the tree.

Particular care should be taken in pruning trees, that the top be well balanced. I have thought, sometimes, that it needed a hard-hearted man to trim an orchard, for if a branch be ever so thrifty where it is not needed to balance the tree, it should be cut off; this done, although you have nothing but a bud left in the right place, you will soon find the branch where it is needed. Very small limbs may be cut off in May. Large limbs should be cut in August. Wood, cut at this time, will remain sound and hard, although it may be some years healing over. Wash trees once or twice a year with soap suds and ashes, and scrub them with an old broom. Destroy all caterpillars' eggs in the month of March. From what I have

learned of others and the addition of my own experience, I am firm in the belief that a good apple tree set on good ground, if well cared for, being in a thrifty condition, in one year from the time it is set, may be counted worth one dollar; and if properly taken care of for nine years more, will gain a dollar each year—making a sum of ten dollars; and for the next twenty-seven years will pay the owner the principal and interest and leave him the tree at thirty years old nett profit.

In selecting the kinds of fruit, I would select some of every good kind, both early and late, sour and sweet; but Baldwins I would make the principal. I will not spend time to prove that no man is too young to set out an orchard; but I will say a few words to prove that no man here is too old to set out one. My own dear mother, when she was between 88 and 89 years old, wished me to send her four apple trees to set out in the four corners of her garden; I did so, and she superintended the setting of them out and helped with her own hands, and has lived to eat fruit from one of these trees.

By way of caution, I would say to nurserymen who raise apple trees to sell, never deceive your customers in the name of the fruit; and to farmers I would say, never set out an orchard until you are determined you will take good care of it; for that man who sets out an orchard and takes no care of it, is to the society of farmers as the backsliding professor is to the society of Christians. Worse than a cipher.

REMARKS.—Friend Sheldon utters above some sound doctrines in relation to the culture of trees, and some excellent advice, which we trust none of us will forget.

PLANT A TREE.

"A thing of beauty is a joy forever."

There has been such a change in the views of our people with regard to the beautiful, as well as the profitable, that all who can control the merest patch of land, proceed at once to do something which shall both please the eye and gratify the taste. How much better this than to see the back yard cluttered with brick bats, old shoes, and the cast-off rubbish of years. A man loves his wife and children better for a pleasant prospect, especially if within the limits of that prospect they may run and gather delicious and wholesome fruits for the dessert or to offer their friends; and they certainly will love him better for surrounding them with cooling shades and gratifying their tastes. Here, then, is a moral effect not taken into account when the old boots and shoes are ostracized—the heart is sustained and made better as well as the corporeal frame.

It is a real pleasure for the child to say, "My father set and cultivated this tree; my mother planted this rose-bush and trained it about this old window-frame, where the Pewee has built its tiny nest, and baby hands have scattered the fragrant blossoms. And does not the parent reap another joy in such expressions? Think, then, of the

moral influence of planting a shrub or a tree, and thus in that pleasant way add something to the moral progress of the race. Trees promote health. They break the winter wind, shield us from the summer sun, and breathe the air which we have expelled and is poisonous for us to breathe again. And then the heart that is oppressed by care or softened by affliction finds sympathy and peace in their gentle whisperings.

Dollars and cents, in this connection, we say nothing about—we desire to touch another chord. Picture to yourself what charms you may cause to cluster about your dwelling, and what true enjoyment you may realize in their creation; what bonds of affection you may implant in the hearts of your children, so that the seductions of wealth, or the blandishments of courts or elegant life, shall never alienate their love from the old rural flower-embosomed home, and then you will be thankful to him who first induced you to PLANT A TREE.

For the New England Farmer.

MORE ABOUT POTATOES.

BY L. VARNEY.

MR. BROWN:—By a notice on page 48 of the current volume of the *N. E. Farmer*, it appears that T. D. MERRISON, of Hill, N. H., claims to have discovered the cause of the potato rot, and a certain remedy therefor. At least, I suppose friend Merrison considers it an infallible remedy, from the fact that he has presented his claims for the "\$10,000." I do not wish to infringe upon his rights, nor upon those of any other individual, but I will inform him that his theory has been in vogue several years, and, with a view to test its correctness, I tried some experiments last year, the result of which I offer for the benefit of others.

I planted a piece of ground with potatoes, on "the north side" of a shed, and on about half of the piece I planted "two or three kernels of corn" in a hill. In my corn-field I planted a bushel or more of potatoes, a few hills in a place, so that the potatoes were pretty well shaded. A part of the same piece was wholly planted with potatoes. On a third piece I planted potatoes at the north side of a wood-lot. None of my potatoes rotted badly. Those near the shed, and in the hills in which corn was planted, showed quite as strong symptoms of infection as those in the hills where no corn was planted. So with those in the corn-field; some hills had but few *sound* tubers in them, while in others there were but few *decayed* ones. But very little, if any, difference was observable between the potatoes growing amongst the corn, and those growing outside of it. The third piece gave similar results. Only a few infected tubers were found, but those growing nearest to the woods were not entirely exempt.

Now I think I have given the *shade theory* one fair trial, and as it did not entirely prevent the disease for which it is recommended, I would suggest that the payment of the premium be delayed *until after another trial*. I presume farmers will not adopt any theory without practical proof. If, by experiments carefully made, it is found that sheds, board fences, or corn-stalks, are a *sure* preventive,

then, if the originator of the theory can be found, let him receive the reward. Patent medicines generally yield a good profit to the inventor, but I do not believe any remedy yet proposed for the cure of this "vegetable cholera" will greatly replenish the pockets of him who offers it in market.

Prof. Horr, in his able essay upon the "Potato Rot," recommends mowing the tops as soon as the disease appears. In 1848 we had a piece of potatoes in which the blight began to appear. I took a scythe and mowed the tops on a part of the lot, hearing that mowing would arrest the progress of the disease. The result was, that *every potato*, I think, in the hills from which the tops were cut, was *entirely rotten*, while on the rest of the piece a considerable portion were sound. Hence it appears that similar experiments produce different results in different locations,—positive evidence that the *true* remedy is not yet found.

Sandwich, N. H., 1st mo., 1852. L. V.

For the New England Farmer.

OTTER BREED SHEEP.

BY RUFUS M'INTIRE.

The facts in relation to the Otter breed of sheep, contained in Col. Humphrey's letter published in the *New England Farmer*, of the 28th of February, are new to me, though there was a breed so designated I knew as early as about the date of that letter, 1811. I had seen sheep partaking of that blood, but never saw a full-blood Ancon (a very appropriate name) till three years ago. I was driving my sheep to pasture in Hiram, Maine, and found in the road a lot of some half a dozen or more old and young. They perfectly answer the description of Col. Humphrey's. It was painful to look at them, clearly cripples from defective organization. They were small though in fair condition. Their bodies appeared round, long and tapering, small in front, as though their fore-quarters were light. One of them, I think it was the ram, beside his deformed elbow legs, had a depressed or saddle back just behind his shoulders. When I first saw them, as the road was narrow, I anticipated some trouble in passing them, but when I drove to them they took the side of the road and manifested no more disposition to mingle with my flock, than if they had been swine. I saw them two or three times afterwards that summer, three years last summer I think, but not taking much fancy to them, I made no inquiry about them. Whether they are now alive or in that vicinity I do not know.

The first I ever heard or knew about the breed, was soon after the introduction of the Merinos. My brother, at York, obtained a buck from Major Rice, of Kittery, from his flock of common sheep crossed with a Merino or part blood Merino buck. He was a small, well woolled and good bodied animal with short legs. But little was then known about Merinos in that region. The next May or June, I was at my brother's, when he had his sheep driven up from the pasture for shelter on the appearance or commencement of a storm. The sheep were driven from a quarter to half a mile perhaps in some haste. Some of the lambs two months old, more or less, were unable to keep up, and one died from exhaustion. My brother, in explanation, remarked that he understood the buck was partly of the Otter breed that were unable to

travel with common sheep. I think he did not long breed from that ram, as he was desirous of infusing more of the Merino blood into his flock. My impression was then, that Major Rice obtained his ram from a brother or other relative of Col. Humphrey's in Portsmouth, N. H., and that the breed was from his flock. If I was correct, it may be there was some of the Ancon blood in the stock. I do not recollect to have noticed any sheep of that race, or the appearance of it, since say 1815, or a few years later, till about five or six years ago, I saw some in Newfield, Maine, at Mr. Oliver Moulton's, very strongly marked by length of body and legs, and other respects, except their deformity, and I think he has some now. I know not where he obtained them. They probably have not much of the Otter blood in them, and their limbs, though small and short, may not have much deformity. I have not, however, examined them critically, and in fact, did not know till I saw them in Hiram, how deformed the full bloods are.

No doubt some of your correspondents can give a more satisfactory account of this singular race of animals.

R. M.

Parsonsfield, March 1, 1852.

For the New England Farmer.

THE OLD TREE'S LAMENT.

BY D. W. L.

O! trim me up, or cut me down!

The old tree sadly said;

When young I had a handsomer form,
And reared a prouder head.

Full sixty years the wintry blast

And Autumn's scorching sun

Have beat upon my spreading brow,
But now my days are run.

Beside this road I've lived and grown,

And dropped my fruit for all;

To weary souls my shade I've lent
From branches thick and tall.

But ruder hands my boughs have seized,

And tore them fierce apart;

A whip-stick or my flowers they craved,
Nor saw my bleeding heart.

To many a bird I've given a nest,

And reared their tender young;

But sadly have my limbs been bruised,
When stones were at them flung!

Old age, I know, would fain complain

And boast its pristine power;

But cease, my voice, my heart is weak,
My day is but an hour.

Behold my limbs, the hoary moss

Is thick upon them now;

I'm but a cumberer of the earth—
My bed invites the plough.

My fragment branches yet point up,

But weak and barren are;

O! trim me up, or cut me down—
I've needed better care!

APPLES.—Looking in at the establishment of the Messrs. CURTIS, this morning, at 104 Faneuil Hall Market, where they now and then sell a few thousand barrels of apples, they had the kindness to unhead several barrels for examination. Those we looked at were principally the Northern Spy, were in fine condition and selling by the single bar-

rel for six dollars, and for five dollars by the quantity. We saw them selling and receiving the cash at these prices. Those who are doubting whether they will plant another apple tree this spring, will "take due notice and govern themselves accordingly."

For the New England Farmer.

DANVERS WINTER SWEET APPLE.

MR. BROWN:—I am sorry that Mr. Hyde should feel himself called upon to *spot* the fair name and fame of the *Danvers Winter Sweet*. That instances may be found, in which this class of trees, as well as the Russet, the Pearmain, and others, have within the last *half dozen years* produced apples less perfect than before, I do not doubt; but that such productions have been general, I cannot admit. In fact, I know of trees, on which the *Eppes Sweet* (as it is called with us) have grown as fair and abundant, for three years past, as ever before. I have one tree of the kind, that has yielded four or five barrels of these apples, in each of these years; and this without any special care, except keeping the soil well stirred about it; all of which have been used in my own family. I feel, therefore, that I cannot mistake as to their quality.

With this fruit, I have been familiar for more than forty years. The stump of the original tree still remains on the Eppes farm; and as I am informed by Mr. R. Osborn, who now owns this farm, that a sucker or sprout from this stump, six or eight inches in diameter, has the marked characteristics of the original tree—showing it to be a genuine natural fruit. I do not think this the best of apples, but while the trees continue to yield as well as they usually have, within my observation, any attempt to change the character of the fruit, would, in my opinion, be extremely injudicious. I am assured that this apple has been most successfully cultivated in the State of Ohio, for thirty years, or more, and that it is there esteemed as one of their best. A fame thus acquired is not to be blasted by the failure of one man's trees, without a thorough inquiry as to the cause of that failure. Next to the *Endicott Pear Tree*—the *Paris Witch House*, and *Eliza Wharton's grave*,—I consider the stump of the *Eppes apple tree* the object most worthy of notice, within the limits of

March 13th, 1852.

DANVERS.

For the New England Farmer.

CRANBERRIES.

MR. EDITOR:—Will you get from some of your Massachusetts cranberry cultivators, an answer to the following questions, viz. The best time to set out cranberries? will they grow well if set out upon bog 10 to 40 feet soil? what proportion of seasons do frosts spoil them? or any insects destroy them? if so, what? Do they do well to sow the seed? what is an average crop to the acre? the average price per bushel for 10 years past? Some people raised good crops on upland 7 years ago; do they continue to bear well yet? are there any barren vines? what sort is best?

As the cranberry crop is becoming one of much importance, we want more knowledge upon the subject. Some people in your State have cultivated them more than 20 years; it seems that they could give information upon the subject, and if they will, it would oblige

MANY.

ELEVENTH AGRICULTURAL MEETING

AT THE STATE HOUSE, TUESDAY, MARCH 30, 1852.

SUBJECT FOR DISCUSSION—*The Subdivision of Lands and Fencing.*

HON. JOHN C. GRAY, of Boston, presided at the meeting on Friday evening, and on taking the chair announced that there was present a gentleman, well known by reputation to many in the audience, and who, he was sure, they would be glad to hear from upon the subject of agriculture. He then introduced to the meeting Capt. PARTRIDGE, Principal of the Military School at Norwich, Vt.

Capt. PARTRIDGE commenced his remarks by alluding to the great importance of the subject of agriculture, and inquired what are some of the obstacles which retard its progress. First he mentioned the prevalent custom of cultivating too large farms. This evil he thought would never be remedied until our country becomes much more densely populated than it now is, rendering land more scarce, and cultivation more thorough. He next spoke of the two grand principles of fertility, viz.:—caloric and water—and said that experiments had shown that of these two, water was the most powerful. Water, he continued, is the grand general manure, and said that we have evidence that the utmost fertility has always existed where irrigation could be practised regularly.

There is a good deal of talk about agriculture by those who know but little of the *labor* attending it. Labor is the ground work of farming; still it is necessary that this labor should be directed by wisdom in order that it be successful. The farmer must calculate and examine his lands in order to suit them to the different departments of culture. Another important consideration is the division of his lands into fields, because the enclosing of them is expensive business—especially in an old country. He gave several examples, showing how by laying out his fields in different shapes the farmer might save much expense in fencing. Every farmer, he thought, should be a practical geometrician. In this connection he alluded to the deficiency of our system of education, in affording our farmers' sons a practical knowledge in the duties of his calling. With the theoretical education of our students in all the professions, there ought to be a thorough practical education. It is a mistaken notion that the educated man must abandon labor. The reason why our farmers are looked down upon, as they sometimes are, may be found in the system which has too much existed among farmers, in educating one son at college at the expense of the education of the others. He would remedy it by thoroughly educating all the farmers' sons, for all the duties of his calling. This he thought could be done in a short time by pursuing a proper course. He would engage that a young farmer of common intelligence, with a

good common school education—could be made a good practical geometrician, and well acquainted with other requisite studies in two quarters of eleven weeks each; they might also become good civil engineers. In this way the character and standing of farmers might be elevated.

In conclusion, he spoke of the sterility of the soil in New England, and counselled a friendly feeling towards other sections of the country with which we find it for our advantage to interchange our products of the farm and other departments of industry.

On motion of Hon. B. V. FRENCH, of Braintree, the thanks of the meeting were tendered to Capt. PARTRIDGE for his address.

Mr. GRAY then made a few remarks upon the subject assigned for the evening's discussion. He alluded to its importance, and said that he coincided in the views expressed to him by a gentleman then present, that in most instances it was best to dispense with all but an exterior fence around the land, and to keep the cattle up, to practice what is called soiling them. The cheapest fence he considered to be stone walls; a cheap kind of wall, he had heard said, could be built for two shillings a rod; they consume the stone with which many of our fields are almost paved, and which it is considered excellent husbandry to get out of the way. When well laid, he considered stone walls a really beautiful fence, and mentioned especially some he had seen in Rhode Island, which were five feet high, and laid without mortar, but yet with great care. He considered it the most effectual fence. Wickersham's iron fence, which has recently been introduced into this vicinity, he commended very highly for interior fences. It can be put up at \$1.25 per rod. For gardens a picket or close board fence will be found best; the former can be put up for \$3 a rod, and the latter, as high as a man's head, for \$4. A good wire fence, he had been told, could be put up for less than 75 cents a rod. There was another kind which in some cases he thought to be preferable to any he had named—he meant *live hedges*. Nothing could be more beautiful or effectual, if well trimmed and kept. He commended highly for this class of fences a kind of thorn introduced into this country by E. H. DERBY, Esq., of Salem, the botanical name of which is *Rhamnus Catharticus*. Some call it the *Buckthorn*. It cannot be killed by heading down. The cattle will not eat the leaf, and it is troubled by no insect; when it is headed down it will grow more thickly and stocky. It can be set out for three or four shillings a rod. For mere border, as evergreen, he commended the *Arbor Vita* as the best plant. It keeps clothed near the bottom; as a single tree he thought it more beautiful than the Funeral Cypress. The English thorn will not do well here. It cannot bear our dry climate. There was one kind of them

he considered dangerous, and that is the *Gleditsia* or *Three Thorned Acacia*, or as some call it, the *Triple Thorned Locust*. It has a spur from which proceed three shoots; if it is not pruned it will grow out of all manner of reason, and if it is pruned it appears unsightly. It sheds its thorns, and he had known an instance where a man stepping upon one of them run it through his foot. He had exterminated all of this class upon his place.

Maj. WHEELER inquired whether Mr. Gray had found the *Buckthorn* hedge a sufficient fence against cattle, or whether they would not tear it to pieces with their horns.

Mr. GRAY thought it might be made a sufficient fence to stop them, if it was cut in and made stocky. They might injure it, but he did not think they would break through.

Mr. FRENCH, of Braintree, said he had been told by persons recently from England that the English farmers are taking down their hedges and supplying their place with expensive stone walls. It had been found a great expense to maintain and keep up these hedges. Besides giving shelter to poachers, they were found to be great exhausters of the soil. As a matter of economy, where the land will admit of it, he thought it best to have the whole farm in one lot, especially unless there was upon the land a superabundance of rock which it was desirable to be rid of. In regard to setting posts, his practice is to burn, so as to char the bottoms of the post, before they are put into the ground. Last year some white cedar posts which were put down thus charred, twenty-seven years ago, were taken up and found in excellent condition. He spoke highly of the *Arbor Vita* for hedges. The *Buckthorn* is also beautiful, but it is hardly a safe fence to keep out cattle. The *Washington Thorn* he had found a good fence to keep out cattle, but it was expensive to cultivate.

Maj. WHEELER preferred the *Hemlock* to the *Arbor Vita*.

For the New England Farmer.

PLANTING OF TREES.

MR. EDITOR:—In my former letter I gave you my opinion respecting pruning of trees; now I will make a few remarks on planting; not that I expect my plan will be carried out—for Brother Jonathan does not like much extra labor, but whoever will take the trouble, will not have to complain of trees decaying after a few years' growth, and then attribute their decay to blight or lightning. I have seen many trees partly dead on the upper branches; ask the cause, and you will be told that it is blight, but it is not so. The cause is, the roots have penetrated into some soil that does not suit its growth, or it cannot enter through some substance that impedes the roots. To obviate that difficulty, and to preserve fruit trees from decay, take this method. Cut a trench 3 feet deep, say 2 feet wide, narrowed at the top from end to end; put your earth that you dig out

first on one side, and the bottom on the other; then collect some wood, old brush, and tree topplings, and put in the bottom of your trench, with a good faggot at each end to give a current of air, put your top earth on, cave the sides on the same, let the earth settle itself, then plant your trees, and I will engage you will not have to give top dressing. As the wood decays gradually they will always have manure for ages.

P. S. Night soil is the best for onions.

S. CLARK.

For the New England Farmer.

PLOWING—DEEP OR SHALLOW.

Almost every man who takes up the pen, in these days, advocates deep plowing. However, it is unquestionably true that there are two sides to this, as well as to every other question. There are circumstances which demand consideration, in regard to the depth to which the plowman should put down the plow. These circumstances are of great importance sometimes to young farmers, who are under the necessity of making yearly payments for farms which they have purchased partly upon credit.

Take, for instance, an old farm, which has been subject to shallow plowing and long cropping and use without much manure. Such land generally has a subsoil which is in a very poor state, while the active soil is very shallow. Much land may be found of this kind, where the active soil is not more than two or three inches thick, and that is very poor; while the subsoil is cold and unfit to favor vegetation.

It is this class of farms which are, in the country, most likely to be for sale; and therefore it is more likely that young farmers, who have laid up a few hundred dollars for a beginning, will buy such farms.

Well, I am of the opinion that the unqualified advocacy of deep plowing may prove very discouraging to more or less of them. They have been employed, perhaps, where they have seen the plow put down deep into the soil, year after year, and bountiful crops in harvest following; but still have not understood the reason why the same deep plowing will not do as well every where.

Let them go on to a piece of ground which has been skimmed over to the depth of perhaps four inches, ten years before, and then cropped until the active soil is not more than two inches deep, and beneath that all is cold as death and poor as poverty, and begin their efforts by turning up eight or ten inches at once, of such soil. How will the matter end? Why, they must meet the difficulties of the case, or find a miserable profit in farming.

The difficulties of the case are real difficulties. If the farmer has only manure enough for putting in a good state eight inches deep of tolerably good soil, and he has only two inches in depth of such soil, then as his cold subsoil will require three times as much to prepare it for the active support of vegetation as the surface soil requires, his manure is only sufficient to put four inches in depth in good order. If he goes at once to the depth of eight inches, it will require sufficient manure to have put twenty inches of tolerably good old soil in prime condition. When, therefore, he finds his crops are hardly worth harvesting, because his soil

would produce no better, let him look at the matter as it should be.

It is easily understood that when the manure for an acre of ground is no more than one-half an acre really needs, the prospect of a profitable crop runs down below zero. When, also, the amount of manure is sufficient to make four or six inches of soil productive, to mix it with twice the depth, or which is the same in effect, to mix it with such a depth as will reduce it to one-half, or less than half, the power or strength necessary to activity, the prospect or chance of a crop is thereby deferred. The plow and the cart must go over it again, and another dressing of manure is to follow, before the ground will give a profit to the laborer.

In all such cases, it is necessary that the depth of plowing should be equally considered with the measure of surface, in using a quantity of manure, so as to secure a profitable crop the first year. Young farmers, and all who must have an immediate profit from their labor and their appropriations of manure, will find it necessary to deepen their soil very gradually; and when they have brought every acre of their ground to have twelve inches of good, active soil, they may reckon it as of three times the value of an acre, on which there is but four inches of good, active soil.

Indiscriminate deep plowing is, in my judgment, indiscriminate folly. I would, however, desire to put down the plow as deep as circumstances will warrant, and continue to do so, where no obstacle is presented, until every acre of ground should become a deep mine of wealth.

Another reason why I would warn every man against plunging the plow to the utmost depth at once, is that the subsoil so often contains properties which are highly injurious to the life and growth of plants. Where any such properties exist in the subsoil, it is not well to bring up any more than can be immediately overcome by the agents to be applied. If it is done, the effect must be evil. It is, therefore, a necessary part of farming prudence to do this work of deepening the soil by a gradual process.

Some subsoils are very sour. Until the acid is overcome, they will prove injurious to plants which do not feed upon acids. If such subsoils are to be brought to the surface, we may inquire, would it not be important to throw them up in the autumn, and let the winter frosts have an effect upon them? Wherever the sour subsoil is to be thrown up in the spring of the year, to be followed by a crop, lime is necessary to neutralize the acid, or, in the absence of lime, ashes may be found of great value.

Other properties may be in the subsoil which are more injurious, and more difficult to overcome. If much is thrown up, the land will be rendered nearly worthless thereby.

It should be a settled and an established rule of action never to make the soil less productive. Everything should be directed to the great object of making the soil *more* productive. When the progressive deepening of the soil causes a poorer crop, it is because there is too deep plowing for the amount of the manure, or because there is too large an amount of injurious matter brought into contact with the growing crop.

The importance of a deep soil is great, where that soil can be composed of proper substances to

give support to vegetation. All the reasons I have ever heard or read in favor of deep soils, have, in my opinion, possessed weight. But many, taking it for granted that deep plowing will produce deep soils, have sought to bring about that end so speedily, that the meagre crops which they have gained after pushing down the plow has damped their ardor, and some of them perhaps have said that "the newspapers are all full of falsehoods."

We advise them to consider the old saying,

"A little learning is a dangerous thing,"

and plunge their heads deeper into the study of that greatest and most necessary of all sciences, the science of agriculture.

There is no great difficulty in accomplishing anything that we desire to, if we only know how.

Mason, N. H., March, 1852.

c.

GRAFTING WAX.

Wax is commonly used now in grafting as being quite as certain to answer the purpose required as clay, and easier to be applied. The best mode of using it which we have ever found is in the following, communicated to the *Bangor Courier*, by Col. LITTLE, of that city, an experienced horticulturist. We have tried the plan recommended, and find it cheap and convenient. The quantity mentioned below would be sufficient to cover twenty or twenty-five yards of common shirting, while two or three square yards would be enough for two or three hundred trees. A sample of the grafting cloth described below may be seen at this office.

It will be observed below that Col. LITTLE considers it important that the *exact proportions* which he has given should be observed. We have made some of the wax from his recipe, observing the proportions given, but do not find it sufficiently adhesive, which made it necessary to add a little more rosin. Mr. PINNEO, a successful nurseryman at Hanover, N. H., informs us that he has used the grafting cloth for many years, but uses much more rosin in the proportions. He speaks highly of its excellence in preserving the limb, and of its convenience in working.

GRAFTING WAX ON COTTON CLOTH.—Inquiries are frequently made for the best grafting wax and the recipe for making it. I have procured the recipe for the best article I have ever seen, which was three years since invented by Maj. Chapman, of this city, which he uses in grafting in his nursery with good and almost sure success. I have used it two years and find it valuable; for it is very pliable, easily worked, and it contains nothing that in the least injures the scion or stock.

It should be made precisely according to the following proportions.

Recipe.—6 lbs. beeswax; 1 lb. rosin; 1 pint linseed oil. (No other than linseed should be used.) Melt them well together over a slow fire. Then with a paint brush, spread the wax thinly while warm, on one side of thin but closely woven cloth. Cut the cloth when waxed (lengthwise, as the warp is the strongest) into strips as may be want-

ed—say half an inch wide and about 9 inches long—according to the size of the stock to be grafted.

Grafting can be worked with these strips very readily, as no strings are necessary, and may be very neatly as well as quickly performed. These wax strips may also be used in budding trees.

I would again remind our citizens that to insure success, all *stone* fruits should be grafted before the frost is out of the ground, or as early afterwards as possible.

Respectfully,

HENRY LITTLE.

For the New England Farmer.

HONEY BEES.

MR. EDITOR:—I am obliged to you and your correspondent, for the answer I have received to my inquiry as to the reason of the destruction of bees without any apparent cause, and will say in reply to the question of Mr. Stockwell, that the bees, in the two hives alluded to were found as he premised, clustered in and upon the comb in which there was no honey. It was stated in my inquiry that bees die in this way, in winter, and sometimes in other seasons of the year. But I will say in regard to the last statement, that I was misinformed concerning the cases I was then thinking of, there being, as I have since ascertained, some other cause (of course) for their death. If, as your correspondent says, (and it looks very reasonable,) "it is the *long continued cold weather* that destroys them," why would it not be good policy for all who have bees, to keep them in the cellar during the winter months, as some do already, and thus secure them from that, which so often proves their destruction?

Yours, &c.,

S. L. WHITE.

Groton, March 3, 1852.

REMARKS.—We doubt whether the true solution of the difficulty of which you spoke in your first communication has been given. But we have another, which accords with our own views, which shall be presented soon.

For the New England Farmer.

PRACTICAL FARMING—NO. 1.

POTATO CULTURE.

MR. EDITOR:—So much has been written upon the best method of cultivating this root, that it may seem quite unnecessary for me to attempt to say anything, but I trust I shall be excused for so doing. Last spring, when planting, I selected four rows; two of them I planted with large potatoes cut into two pieces, one piece to a hill, the other two, with the small ones, from which I had picked the seed for the other two rows. They were treated alike in every other respect, and the whole seed produced one-eighth the most, and they were smoother than those raised from the cut seed. They were of the variety known as the long red. I like medium sized whole potatoes best for seed. To plant all the little ones, seems to me too much like planting the tips of ears of corn, instead of the full ripe grain. We generally plant our potatoes on greensward turned over the fall previous, (the earlier the better,) using a small quantity of gypsum, lime or ashes, in the hill, using no other manure.

We have never been troubled much with the rot. Our soil is a rocky highland.

I do not pretend to know the cause of the rot, but allow me to say, that I regard manuring with unfermented manure, planting small, unripe seed, as among the procuring causes of this disease. Let potatoes be planted upon soil that is moderately dry, and in a condition only to produce a moderate crop, and according to my experience, your potatoes will be good in size and quality, with little or no rot.

One hundred bushels to the acre is about an average crop with us now, in good seasons, though before the disease was known, our crop has been more than double that with the same treatment; and this is one reason why I think that the rot is caused by exhaustion from the seed and soil, for our crop has diminished gradually. I am of the opinion that by planting good ripe potatoes without any stable manure, and by the use of lime and gypsum, the rot may be remedied in the course of time.

At any rate the experiment is worth trying. In conclusion, let me ask what are the constituent parts of the potatoe?

Let us know of what it is composed, and then manure accordingly. S. TENNEY.

N. Raymond, Me., March, 1852.

REMARKS.—The organic or vegetable substances which are found in the potato, are 75 parts water, 15 of starch and 2 of gum and sugar. The inorganic, or mineral, are potash and soda—the potash largely prevailing.

Whether it is best to plant large or small, cut or uncut potatoes, remains a question. Some of the best farmers still prefer small potatoes or large ones cut.

SCIENCE AND TAILLESS FOXES.

There are some persons who wage uncompromising hostility to science, not because it is not good, but because it is *science*, and smells of the schools. They would plow deep and receive as much benefit from it as do their neighbors; but as deep plowing is scientific, they prefer to plow shallow and gather shallow crops. They refuse to stir the soil and give it a fine tilth in a dry time, for fear such scientific operation should cause the earth to catch some virtue from the passing breeze, or steal a little ammonia (base scientific term) from the pearly dews. Nature is nature, say they, and we want none of your new fangled notions; my manure is well enough in the barn-yard, and I'll risk the atmosphere, as you call it, stealing any thing away from me. These notions remind us of the fox who lost his tail. The next time he visited his brother foxes, he addressed them thus:—"Gentlemen, behold my fair proportions! without that heavy brush I am light and active—it is useless and unbecoming, and my advice is, that you have them all clipt off!" Unlike the unfortunate fox, these grumblers about science never had any tails to lose—never had any *scientific* tails, at least, and their desire is that every body may stand on the

same level with themselves, totally ignorant of the first principles of scientific cultivation.

But their doctrines are false. To be consistent, they should eat *natural* fruit; grafted fruit is scientific fruit, and ought to be bitter in their mouths. They should scorn wheels and go to mill on horse-back without a saddle, and draw manure on a drag; plow with a crooked stick, and keep as close to nature as possible. They inadvertently practice scientifically a thousand things just as important as deep plowing or proper pruning, but these things have become established by the common practice, and they no longer object to them.

In spite of us, new notions *will come up*, and, *will be adopted*, and the best way is to be thankful that there are some willing to think and work them out, and to adopt them good-naturedly ourselves. We shall find it far better for the world, and easier for ourselves, than to resist the tide of improvement which is setting so strongly onward.

For the New England Farmer.

FARMERS' WIVES.

BY A LADY.

As no one is expected to close eyes, or ears, while seated in a rail car, and as passengers are not always particular to speak in whispers, why of course one must sometimes hear one's neighbor's opinion of the world, &c.

This was my privilege one rousing cold day this winter. Two young ladies were conversing upon the fate of some of their friends who had left boarding school with themselves, and were married.

"And have you called on Jane N., since her marriage?" inquired the elder.

"Why no, I have no patience with such girls! Just think of her education, and the respectability of her father's family, and you know her brother is a lawyer too; and she, would you have believed it, has married a farmer! It is scandalous I declare! Call on her—no! Why I would not dare to call in the *morning*, for I dare say I should find her making butter, or skimming milk, or doing some like piece of domestic drudgery! I would not call at *night* for fear I might find her milking the cows!"

"Really, it shocks my nerves to think of the thing!"

"Yes, and it is said she might have done better than to have married this farmer."

"I have no doubt of it," replied the elder, "for I am positive she received the offer of a clerk in a wholesale store in S. 'Tis true, he is a little dissipated, that's bad, but nothing to this; compare him with a plow jogger!"

"But have you ever seen Jane's husband?"

"No, nor do I wish to; if he is a *farmer*, that is enough."

The reader can perhaps imagine, of course, my "pen cannot describe," with what feelings of shame and dismay, I, a farmer's wife, must have heard the above remarks.

Fortunately for me, however, I had sufficient presence of mind to see to myself and baggage, for my "plow jogger" remained at home. Lucky was this for me, for if like Cain, he carried no "mark on his brow," he might have carried it on his hands!

It is natural for us to inquire, what is the basis of opinions and feelings like those expressed by the young ladies referred to? And are such opinions, (which I really think were honestly felt and spoken,) correct?

Is an educated and refined lady degraded by marrying a farmer, merely because he is a farmer? Without hesitation, I reply, she is not, under any equality of circumstances. Let us suppose a case.

An intelligent and respectable farmer, (by respectable I do not mean *fashionable*, as many understand the term) looks about him for a wife. From what class shall he choose? Shall he go to the city and select from the fashionable and the gay? By no means. But shall he take one who will be no sharer of his hopes and fears, his joys and sorrows, but one who will, as I heard a man once remark of his wife, "be a very serviceable companion," because, forsooth, she will rise betimes and do all the "drudgery" and plod on till night? No—we will give the preference to one, who although she may be educated and refined, knows well that "worth makes the man."

And now is there any good reason, why a lady placed in these circumstances, should be considered to have lowered herself a whit beneath her friends, who perchance have married, one a lawyer, and another a merchant? Let us see wherein the difference consists. We will suppose the farmer possessed of a competency, or in other words, "well off in the world," to use a homely expression, and the lawyer, or merchant, as it may be, similarly situated. Where is the great, the vast difference?

"Why of course the farmer's wife has to live in the country—that is reason enough," says one, "her location excludes her from association with the better part of society, who are found in large places." True enough, the farmer and all pertaining to him must live in the country. But does this debar them from mingling with civilized, nay, refined society? The fact is, Mr. Editor, as I am a farmer's wife, I have abundant evidence, that my city friends do not slight me in summer, nor do they express to me their horror of the farmer's life, nor are their nerves weakened at all, as my house is opened for their inspection. 'Tis true, they do not so much delight to visit us in winter, but all the better for us, it leaves us the opportunity of repaying these visits.

But says one, "It is one thing for us city people to *rusticate* awhile in the country, and another, and quite a different thing, to be obliged to live there, and do work, farm work." True, but it is also one thing for us to visit you, the merchant's wife, in the city, and another to have the care of your household, for it is vain for any housekeeper who has any proper sense of the obligation resting upon her as such, to plead exemption from care, and even labor, in some degree. You visit us in the country, when nature perchance is clothed in her gayest robes; her beauty, the melody of birds, and the music of the waterfall, allure you to the open fields; this you enjoy, and rightly too, while we are preparing the viands, which, "Alas! you say for your country appetite, soon disappear!" Now when we visit you, we are free to attend to business or amusement as we may choose, while you perhaps are in your kitchen, weary, and disheartened, with your vain endeavors to make your new Irish girl an accomplished cook. Of course, but few women of any class have any idea of *rusti-*

ating the year round. If one's happiness depends upon constant interchange of visits, and an unceasing routine of fashionable gaiety, one who lives in the country with these tastes, must either remain ungratified, and unhappy, or her tastes and habits of feeling must change. But gratifications of this sort are by no means an essential part of happiness. But a more serious reason, and one which is oftener brought as an objection to the situation of a farmer's wife, is this. In order to discharge her duties satisfactorily and creditably to herself and family, she must do an immense amount of hard work. By the way, this objection is viewed differently by different individuals. There are those who look upon all physical labor as *degrading*, and there are not a few in the community.

"How singular and unfortunate it is," exclaimed one of this class, not long since, "that Mrs. S., than whom no lady in New Hampshire possesses more true refinement of mind and heart, and more valuable accomplishments, should shut herself up on her farm, and that is not the worst of it; why, she actually, when her friends from D. were visiting her last summer, begged them to excuse her an hour in the morning, while she assisted in putting a cheese in the press!"

Now persons of this class do not despise labor because of the *amount* to be performed, or the time required to perform it, but they despise *work*, *labor*, in any form. They have no idea of comfort, worth or happiness, if it is associated with labor. The *laborer* is contemptible. These same individuals are not always so nice in their distinctions as they might be. They seem to forget, when plucking the tempting peach or plum from the tree, that labor planted and reared that tree.

But they never forget that it is beneath the dignity of an accomplished woman to make bread, butter or cheese. One thing, however, is certain, it is not beneath their dignity to eat them after they are nicely made.

For my own part, my perceptive faculties are not sufficiently keen to make the nice distinction, why I should be ashamed to say I make the butter and cheese, (provided it is well made,) and proud to say my husband planted and reared the tree, the fruit of which is so delicious to the taste.

But there are those who sincerely believe, that no class of women in this country, do work so hard as the farmer's wives. That circumstances often require this, it is useless to deny. But that a woman is constantly to work, and have no leisure, because she is a farmer's wife, I do deny. A man who owns a *small* farm, is not required to hire much help, so that the labor of his wife is not very great. One who owns a larger one, and is required to hire help "out of doors," if he manages as he ought, with economy and skill, will also be able to hire all needful assistance "in doors." Where a man owns a large farm and is still unable to hire all needful help for his wife, we infer that there is an exception, and is not the general rule. Bad management, an avaricious disposition, or anything which tends to increase the burden of the wife, are wrong management somewhere, and this makes not necessarily the result of tilling the soil, but these same habits and traits of character would exhibit themselves in any other situation in life, and of course the result would be the same.

Brentwood, N. H., Feb. 12, 1852.

REMARKS.—“Good wine needs no bush,” any more than such a communication needs words of ours. We thank our fair correspondent for her favor, and hope at some time to taste her “bread and butter.”

For the New England Farmer.

WORMS IN HORSES.

MR. EDITOR:—Having a colt that is badly afflicted with worms, (a.) I wish to inquire through you, or some of your correspondents, the best method of destroying them, and likewise the best mode of feeding (b.) and training colts from the time they are taken from the mare till old enough for labor.

Minot, Me.

A SUBSCRIBER.

REMARKS.—(a.) The evil you speak of is undoubtedly occasioned by some derangement of the digestive organs. Set those right and the other difficulty will probably disappear. But, as a partial remedy, give the colt cut feed for a week and sprinkle a gill of clean wood ashes upon it every other day. After this give him a similar feed once a week, and we think you will have no more difficulty, if the general health of the animal is good.

(b.) To answer the question, *what is the best mode of feeding and training colts?* would require more time and space than we can conveniently devote to the subject now. But briefly, feed the colt generously on good nutrient food, such as sweet hay, a few roots, and grain of any kind in small portions at a time. Give him good pasture in summer, a warm, dry shelter in winter, that he can occupy when he pleases. Feed *generously*, always, so that while the head and limbs are enlarging, the muscles may be kept full and perfect. Animals which have been stinted in food and the flesh kept low, and at the same time chilled by exposure to storms or severe winter weather, will scarcely assume that beautiful symmetry which marks those that have been well fed, and cared for. And this is not the only injury they sustain. The constitution is affected, and the spirit and energy of the animal is depressed beyond recovery. They begin their service with the symptoms of old age, and never outgrow them.

The *breaking* of a colt should be commenced before he is twenty-four hours old. Handle him frequently—make a pet of him. Bridle him young, and the winter when he is two years old, place a wagon saddle on his back, and buckle the girth loosely. Take it off at night, and after doing this a few times, add the breeching, and pursue this course with all parts of the harness, until the whole is familiar to him. Then add the whippletree and while a careful person leads him, hold back so that he may feel the pressure of the collar or breastplate gradually. If he is high spirited, so much the better—if you do not beat him. Be resolute and firm with him, but not abusive. Let him understand that you are master, but a humane

and reasonable one. Treat him in this manner, and ninety-nine in a hundred will need no other breaking. *Breaking* is the word, no other will express the practice which has obtained. They have been broken, head, back and legs, until they were nearly valueless, and not from any fault of their own, but from the ignorance of the *breaker*!

Colts do not refuse to work from any disposition not to earn a living, but because they do not understand what is required of them. They need to be educated, and this must be done gradually—not in a day, or a month, but months. These are only a few brief hints—study the animal yourself, and you will learn what course is required to be pursued.

For the New England Farmer.

PREPARATION AND APPLICATION OF MANURES.

BY J. W. PROCTOR.

MR. EDITOR:—Next to deep stirring and thorough pulverisation of the soil, is the judicious application of manures, to insure successful culture. In most of our fields, that have been under culture the last fifty years, such applications are indispensable. How these manures shall be secured and prepared, are questions that present themselves to every cultivator. Perhaps, in no way is there occasion for the application of science, strictly so called, more than in the preparation and application of manures. The minute subdivision of manures, and the complete intermingling them with the soil, is the first thing to be attended to. This I have so often seen illustrated, by the gardeners and growers of vegetables, in my vicinity, that I cannot doubt, that the nearer the farmer imitates these operators in their preparations for the reception of the seed, the more certain will he be of an abundant harvest.

One of the greatest mistakes made in the application of manure, is the putting them upon the lands in a crude and immature condition. More than half their virtue is lost by such mistakes. The best cultivators rarely use their manure, until it has undergone a preparatory process of about one year. They believe that much is gained by such delay in use. This is peculiarly the case with Mr. Mason, of Beverly, the gentleman to whom I have heretofore referred, as the most successful grower of crops in our county. Situated on a farm with soil of naturally ordinary quality, with vigilance in the collection and preparation of his manures, he has made his acres yield an income of more than *three hundred dollars*, with a continued improving condition of the soil. And this, in reference to nearly all the vegetable crops generally cultivated, such as onions, cabbages, beets, carrots, medicinal herbs, &c., &c. Such an income from our grain crops is not to be expected; but *one hundred dollars* an acre may readily be obtained from these—when the lands are properly prepared.

Manure may be classed under the heads of *animal, vegetable and mineral*. The excrements of animals, and decayed animal substances, are used for this purpose. Decaying vegetables, not consumed by animals, yield manure. Lime, gyp-

sum, bones, &c., are illustrations of mineral manures.

In no department of rural economy are our farmers more deficient, than this of manures. In none is there more room for beneficial illustrations, by well-conducted farm schools. Different soils, and different crops, require rules adapted to each. To ascertain what these are, is the grand desideratum in good farming.

At a late meeting at the State House, it was said there were 100,000 farm establishments in the State of Massachusetts, and that there was scarcely one of these, in which there was not lost annually at least \$10 for the want of proper care of the manure. This when spoken of in the aggregate, makes the large sum of *one million of dollars*. But can there be any doubt of this? Let any one examine the premises where is kept only a horse, a cow and pig—and they will readily see how there could be made twice as much manure as is ordinarily done. Here then in a very small establishment is a loss of more than *ten dollars*—much more, then, will be the loss proportionally, in large establishments.

On all those farms, where convenient coverings for the animals and their droppings are wanting, summer and winter, it is fair to say, that full one-half of all the nutritive qualities are necessarily wasted.

Much is lost, also, in the preparation of the compost heap, away from the field to which it is intended to be applied. The expense of transportation neutralizes, in a great measure, the benefits that might otherwise be derived. Much is lost by the application of manures upon or near the surface. If buried to the depth of 5 or 6 inches, there is no danger but the fibres of the tenderest vegetables will so extend as to use it up—and when laid upon the surface, the most nutritious and volatile properties of the manure soon evaporate and are gone. All manures will lose more than they gain by keeping above ground. Manures move in all directions when in the ground, but more upwards than downwards—therefore, there is less danger in covering them, than leaving them uncovered; and there is never hazard in perfectly fining and commingling them with the soil. This I regard as the main-spring of successful culture.

P.

Feb., 1852.

For the New England Farmer.

FARM SCHOOLS.

BY JOHN GOLDSBURY.

MR. EDITOR:—I wish to say a few words more upon Mr. French's plan of establishing, in some suitable place, a *model and experimental school in agriculture*, in which the whole science, in all its branches, may be thoroughly taught and learned. It is very evident, (at least, to my mind,) from what has already been said in a former communication, that the science of agriculture cannot be successfully taught or learned in any of our present institutions,—neither in our higher seminaries of learning, nor in our common schools. If it is to be taught scientifically, thoroughly and systematically, (and there is everywhere great need of such instruction,) it must be taught in an institution established expressly for the purpose, and possessing all the requisite means and facilities for accom-

plishing the object. It will not do to have agriculture "go snacks" with other studies in any of our existing institutions, and to come in for its share of attention; nor to have it stand second in importance to any other branch of science; but it must be made the first, and stand at the head and alone; and all other studies must be made to contribute to its success.

The plan of Mr. French appears to be eminently well calculated to accomplish its object, for two reasons, 1, because it is a *feasible* plan; and 2, because it is an *economical* one.

1. I call it a *feasible* plan, because it is so simple, so practicable, and so easily accomplished. It is attended with no great difficulties or obstacles. It needs only to be clearly understood, to commend itself to every one's mind, as *the* plan, the only sure and successful one, which, if universally adopted and carried into effect, will be attended with *certain success*; and all that is needed to carry it into effect, is the hearty co-operation and support of all the friends of agricultural education. If they could all be united in support of this plan, and be led to act in concert, they could easily secure for it the desired aid and assistance of the State. Massachusetts, ever liberal in the bestowal of her favors, and always the first and foremost in supporting other institutions of learning, would not niggardly refuse, when properly requested, to grant a sufficient sum to establish an institution designed to benefit the great mass of her laboring population, the very bone and muscle of the State. More especially, as this request for aid would come from farmers, without distinction of sect or party, for whom she has heretofore done so little, and to whom she is highly indebted for her present wealth, prosperity and happiness.

2. I call it an *economical* plan, because it can be so easily and cheaply carried into effect. Mr. French's plan contemplates the establishment of only one model and experimental school at the outset. One school is as good as fourteen, (the number of counties in the State,) to test the usefulness and success of the plan. This plan, therefore, does not require the expenditure of large sums of money, till its usefulness and success are made certain in the minds of all. But, in all other plans, vast sums of money must be expended at the outset; and this expenditure must be renewed from year to year. It will require no trifling sum to establish a professorship in connexion with all our colleges and higher seminaries of learning, or even to appoint a sufficient number of lecturers to give instruction in all our common schools. These vast expenditures will be continually increasing from year to year, till they mount, "like Pelion upon Ossa," to an enormous sum, and become very onerous to the people of the State. And it is easy to see, that these plans would, in the end, prove an entire failure, which would be death to the cause of agricultural science.

J. G.

Warwick, Feb., 21, 1852.

REMARKS.—The plan for a model farm school as set forth by our associate, Mr. FRENCH, struck us at the time as the most feasible and safe, of anything that we had heard of or seen described. We are glad to find his views so ably sustained by our correspondent above.

[DWARF PEAR TREES.]

SELECTION OF PEARS.

SIX BEST PEARS ON QUINCE STOCKS.

Dwarf pear trees occupy but little space, and afford delicious fruit. They will almost grow in a flower-pot. Even among the garden beds their shade is not particularly injurious,—in a dry season, perhaps it is beneficial. The mother or daughters may cultivate them with ease, if the father and sons are too much occupied with other affairs, or have not the taste. Those who wish to plant a few trees only, are often troubled to select these few from the long lists in the catalogues of the nurserymen. We have, therefore, selected the six pears which we should set, if we desired to put down only that number.

1. Louise Bonne de Jersey.....for Fall.
2. Vicar of Winkfield.....for Winter.
3. Beurre Diel.....for Fall.
4. Passe Colmar.....for Winter.
5. Gloist Morceau.....for Winter.
6. Duchesse d'Angoulême.....for Fall.

We will give a brief opinion of each from Downing. The *Louise Bonne de Jersey* is one of the best new autumn pears, fair and glossy, exceedingly juicy and well-flavored. In this country it succeeds admirably. Fruit large, a little one-sided. Skin smooth and glossy, pale green in the shade, but overspread with brownish red in the sun, and dotted with numerous gray dots.

The *Vicar of Winkfield* is occasionally a fine table pear. Its great productiveness, hardiness and fine size, will always give it a prominent place in the orchard, as a profitable market, cooking pear.

The *Beurre Diel* is, in every respect, a first-rate fruit in favorable situations. Its vigor, productiveness and beauty, have made it already a general favorite.

The *Passe Colmar* is a fruit of the first quality; and has become one of the most popular winter pears in the middle States, on account of its excellent flavor, vigorous growth and abundant bearing.

The *Gloist Morceau* is perfectly suited to our climate, bears excellent crops, and should have a place in every good garden. Its name signifies *greedy morsel*.

The *Duchesse d'Angoulême* is a magnificent dessert pear, sometimes weighing a pound and a quarter. When in perfection, it is a most delicious fruit of the highest quality. Loves a warm, dry soil.

SIX BEST PEARS ON PEAR STOCKS.

1. Flemish Beauty.....for Fall.
2. Golden Beurre of Bilboa.....for Fall.
3. Fulton.....for Fall.
4. Beckel.....for Fall.
5. Dearborn's Seedling.....for Very Early.
6. Beurre d'Arenberg.....for Winter.

In good soils and open situations, the *Flemish Beauty* is certainly one of the most superb pears in this climate. At page 9, volume I., of the *Farmer*, the reader will find a beautiful engraving and full description of this excellent fruit.

The *Golden Beurre of Bilboa* is of a fine golden color, relieved by a little russet, and is certainly a beautiful early autumn pear of the first quality.

The *Fulton* is a native of Maine, is very hardy,

bears every year abundant crops of nice small, gray russet pears, which, if picked early and ripened in the house, are of very excellent quality.

The *Sackel*.—Mr. DOWNING's praise of this is very liberal: he says, we do not hesitate to pronounce this American pear the richest and most exquisitely flavored variety known. The tree is the healthiest and hardiest of all pear trees, forming a fine, compact, symmetrical head, and bearing regular and abundant crops. We add that the *Sackel* may be grafted on large trees, and soon become productive.

The *Dearborn's Seedling* is a very admirable early pear, of first quality. It bears most abundant crops in every soil, and is one of the most desirable early varieties. Ripens about the middle of August.

The *Beurre d'Arenberg* is certainly one of the first of winter dessert pears in our climate. It is a fine, large fruit, very high flavored, bears most abundantly, and always keeps and matures, with perhaps less care than any other winter fruit in the house. When in perfection its flavor is not unlike that of the pineapple.

In the above you have a list of twelve pears which we consider the best, if you wish to set only about that number. If you wish to extend it, a much larger list may be found in the monthly *Farmer* for April. In making the selections, we have consulted two or three of the most distinguished horticulturists of New England, and therefore have great confidence that the list is a good one.

For the New England Farmer.

EFFECT OF COLD ON PLANTS.

At this season of the year, the fruit trees, especially the more tender kinds, are exceedingly liable to receive injury by the change from cold to a warm temperature. By this cause not only is the fruit culturist exposed to the loss of his fruit for the year, but even sometimes to the loss of the tree itself, or to great injury arising to it.

The spring will usually be more forward in proportion as the winter has been more severe. That is, if the temperature of the opening spring is precisely the same in two successive seasons, that degree of temperature will bring forward vegetation more quickly after a winter of greater cold, than after a more moderate one. The reason of this is, that cold quickens the sensibility, and excites the irritability of plants, which is the reason why vegetation is more rapid in a colder climate than in a milder region. When plants have been long exposed to a lower temperature than usual, the sensibility is so increased, that if they become suddenly subjected to a powerful heat, their too excessive increase of action induces inflammation, which proceeding to mortification, causes the death of the plant; or in a less degree, causes the destruction of the fruit. The effect being similar to the sudden application of heat to the human limbs when frozen. This is considered to be the reason why seeds germinate more readily, and at a lower

temperature in the spring than in the fall. Barley is more easily malted in the spring than in the fall, from the same cause. And vines that have been exposed to the winter's cold without shelter, put forth earlier than those which have been housed.

This increased irritability of plants after exposure to cold was shown by an experiment made in England many years ago. Dr. Walker made several incisions in a birch tree, from which the sap flowed on the 26th March, with the thermometer at 39°; but it did not flow on the 13th with the thermometer at 44°, or 5° higher. The reason of which was supposed to be that on the night preceding the 25th, the thermometer was seven degrees lower than on that preceding the 13th—and the greater cold excited the irritability of the tree to a greater degree. And it has been found that this irritability is greater in the morning than later in the day, from the same cause.

Those plants, therefore, that are kept housed during the winter, should be occasionally exposed to the cold, if possible. And seeds should be kept in a cool place through the winter, to increase their irritability, and thus promote an earlier and more vigorous germination.

This is a practical knowledge, within the range of common experience, as the knowledge of the similar increased sensibility in persons who are frost-bitten and brought to a hot fire. But I am inclined to think that the knowledge is not turned to much practical account. Perhaps, in general, it is the practice to keep seeds in a cool place through the winter. But the fact might in some other cases be quite important in the operations of husbandry,—as in transplanting trees in the spring; which, supposing the temperature to be nearly alike in two corresponding periods of different years, at the thawing of the ground and after, should be transplanted earlier after a very cold winter than after a moderate one, because if the spring weather is about alike in the two years, the trees will come forward earlier after the cold winter than after the other. And it will not be a good practice to cover any plants or trees through the winter that are able to stand the climate without cover; and those that are not able to withstand the coldest weather, and are therefore covered, would be benefited by exposure to occasional cold, to as great a degree as would be safe for them.

As the season for transplanting trees is near at hand, I have thought that this hint might be profitable to some of your numerous readers, though the fact on which it is based has not escaped their notice. For though the gardeners and those who have need to keep it in mind always or periodically, will not overlook it, yet farmers who are setting out orchards might not, in all cases, attend to it.

J. A. B.

For the New England Farmer.

NATURE'S FREAK.

A small greening tree on the farm of Capt. Wm. Tilson, of Halifax, was sawed off and Baldwin scions were inserted on the stock, which on fruiting bore Baldwin apples the first year, of good size and quality, but has since borne Greenings, and them only, for several years. Can any one explain the cause?

E. C. H.

East Bridgewater, March 8, 1852.

*For the New England Farmer.***EDITORIAL MILE.**

MR. EDITOR:—Some of your correspondents, away up here among the hills in the country, have almost made up our minds not to send any more communications to your mill to be ground out, as our grists remain so long in your editorial hopper, that when they do come through the mill, they appear to be quite tasteless, senseless, and out of season. It is in vain to tell us, that you cannot prevent this delay, on account of low water, the want of a larger hopper and a more powerful mill, when we frequently witness such long communications in your columns. It is the duty of a good miller to see to it, that no one man should have more than forty bushels ground at any one time, while another man is waiting for a single bushel to be ground for the use of his family. We hope, however, that these honorable gentlemen will still continue to favor you and the public with their communications; but we hope, in mercy, that they will not attempt to elbow every body else out of the world, because they happen to be in it. To be serious, we would like to see a greater degree of brevity and precision observed in the use of language both on the part of editors and their correspondents. "Words fitly chosen," *multum in parvo*, "are like apples of gold in pictures of silver." The way to make room for all, is for each one to be contented to occupy a brief space. If any one has anything to communicate, let him do it in language the clearest, strongest, briefest possible; but let him stop when he has done. MOUNT GRACE.

Warwick, March 29, 1852.

REMARKS.—Our correspondent's reason for believing that communications sent us become "tasteless, senseless and out of season," is one of the reasons which induces us frequently to defer articles, to wit, that there may not be too much on the same subject crowded into our columns at the same time, or within a brief period. But there are many other reasons which might be given for occasionally deferring them. With every desire to please, we sometimes find it absolutely necessary not only to defer articles, but what is still more unpleasant, to withhold them entirely.

*For the New England Farmer.***WINTER WHEAT IN MAINE.**

That winter wheat can be raised to advantage in Maine seems now to be the settled conviction of very many farmers who have for the last few years raised it with good success, the yield in many cases being considerably greater than that of spring wheat. The crop last season was in some sections injured to some extent with rust, yet as a whole was highly satisfactory to our enterprising farmers who have engaged in it, zealously determined to prove whether it could be raised here or not.

Numerous instances can be given where from 30 to 40 bushels of prime winter wheat have grown from one bushel of seed. A neighbor of mine raised 100 bushels of fine quality from 4 bushels, a yield of which no farmer need complain.

There was a large crop put into the ground last fall, by many farmers in various sections of the State, which so far as heard from looked very pro-

missing, when snow came, and has completely protected it up to the present time, so that the risk of its being winter killed is very small. Should it continue to succeed, as at present, which there seems no reason to doubt, a large amount of money will be retained at home, which has formerly been sent abroad for flour, thus materially increasing the farming interests of Maine.

W. TABOR.

*Vassalboro', Me., 3d mo., 1852.***TWELFTH AGRICULTURAL MEETING,**

AT THE STATE HOUSE, TUESDAY, APRIL 6.

SUBJECT,—*The Subdivision of Lands and Fencing and Farm Buildings.*

The meeting on Tuesday evening, April 6, was thinly attended, owing to the very unpleasant state of the weather. Hon. B. V. FRENCH, of Braintree, presided, and on taking the chair, spoke in general terms of the necessity of fencing, a department of agriculture which has been recognized and practised from the earliest days. In New England he thought we had been in the habit of cutting our farms into too small lots, but the manner of enclosing must vary according to the nature of the land. Land which is not fit to plow, such as woodland or pasturage, must be cut up into smaller lots than that fit for cultivation. It is estimated that on the average but 6 acres out of 100 in our own State is fit for the plow. Such lands as are fit for cultivation should be in as large lots as can be made convenient. In regard to sheep, it had been found that if you put ten sheep into a ten acre lot, pretty well fenced, the most of them would find their way out the first night or the next day. But if you put one hundred sheep into a hundred acre lot, with an inferior fence, and drive them slowly round the pasture so that they may have a look at the fence, they will remain in the field contented. A small number of horned cattle in a small enclosure would also be more breachy than a large number in a large enclosure. For an economical farm, where the land will warrant it, he prefers but one enclosure—but would have that substantial. In placing farm buildings he would have them placed further back from the road than is now the custom. He always prefers stone for fences where it can be obtained, and would prefer to draw it even two miles, than to depend upon a common post and rail fence. Mr. French in this connection, alluded to his remarks at the last meeting upon the subject of hedges, and repeated them in substance. In regard to setting posts—a gentleman from New Bedford had told him that he had examined and found the frost to penetrate the earth to the depth of 2 1-2 feet. He then set his posts 5 feet 2 inches—twice the depth of the frost; and the result had been, that he had not been troubled with having his posts moved by the frost. Where stone is scarce Mr. French thought the wire fence might be introduced to good advan-

tage. The wire might be used with white cedar posts, and be made to last a long time. If this fence looks too bare to please the eye a row of *arbor vita* might be set out in front of it. For a design for an economical farm he said he had never seen any so perfect as the lands at Mount Vernon, the home of Washington. He closed by alluding again to the opinion that it is best to have but one enclosure on the farm, and to keep the cattle up and soil them.

Mr. TUDOR, of Boston, spoke of a kind of fence which he has introduced on his lands at Nahant, with the object of changing the climate. In 1825 he built a cottage there, which was in the midst of a cow pasture, in a very exposed situation; the winds would cause the doors of his house to slam, and would blow out his lamps. He then built some lattice fences, made of laths, from 16 to 18 feet high, which he estimated excluded about two-thirds of the wind. This produced a great change. Where before no trees would grow, he can now raise, under shelter of the fences, the finest varieties of fruits and flowers. On the 13th of March, he sent to his man at Nahant, to examine the ground in different places to see what effect these fences had upon the frost entering the ground. The first land from which returns were made, was in a situation exposed to the N. W. wind, and showed frost to the depth of 24 inches; where the wind was intersected by one of these lath fences; the land having a southern slope—the frost was 7 inches deep; where it passed through three of them from 10 to 13 rods apart, 1 1-2 inches and in a large part, no frost at all; all this land was in a state of open cultivation. This experiment shows that the wind in passing takes the heat from the earth; and these fences exclude the wind while they leave the air to pass over the land. In regard to the influence of these fences upon the atmosphere, he could describe it no better than by saying that when he is cold on his other land he goes into his garden to get warm. They are very effectual in keeping out marauders, and can be built quite cheap. A fence which he built in 1834 is now standing, and in good order.

Mr. SHELTON, of Wilmington, next took the floor. My remarks, he said, are not intended for the gentleman's front yard or the lady's posy garden, but for the farmer who produces for the great family of mankind—beef, pork, mutton, every kind of grain, all sorts of vegetables and fruit. If he had a meadow to fence, he should dig a ditch; the mud carried on to the upland will pay the labor. If he has stony land where he wishes to raise an orchard, dig out the stones and lay them into a wall. The soil under the wall will be worth more to the roots of the trees than any other part of the field. If he has a field where there is no stone, let him build a rail fence. Seventeen years ago, Mr. Flint, of North Reading,

and myself, made an agreement with Hon. Jas. F. Baldwin, of this city, to build a rail fence on each side of a new road between Woburn Centre and North Woburn. This fence stood 14 years before I ever noticed a post or rail much out of place. Since then on dry, sandy land it has failed considerable; on the low ground it is good yet. I should think it is now worth to the owner 40 cents per rod. The cost of the fence when built was 56 1-4 cents per rod. This fence was made from cedar slabs.

There are large portions of our land in Massachusetts that may be profitably fenced with what I should call a living fence; not by thorn bushes, but by sowing on the poorest dry land, in a line where you wish for a fence, pitch pine seeds; on cold flat lands white pine seeds or sow the seeds of any tree such as the nature of the land is calculated to produce—such as Acorns, Chestnuts, Beechnuts, Horse Chestnuts, White Maple and Sugar Maple. The main point is to sow that which is natural to the soil. Be sure to sow all these kinds thick enough. This may be done by running a plow along and sowing in the furrow and at the outer edge of the furrow. The pines will be likely to produce you a sufficient fence in ten years, and in thirty years you would be likely to have noble rows of trees all around your farm wherever you had sown seeds, and if at any time you wished to point out the boundary of your farm to any person at a distance from you, it would be easier and pleasanter to point them to a long row of tall trees, than to a little hedge of thorn bushes. This kind of fence I would recommend to railroad corporations. Let each man who has charge of a section of the road sow the seeds inside of their old fence. I would also recommend to new railroad corporations where the line of their road runs through, to take one rod of extra land for the purpose of raising trees for fence on the sides of their roads. If these trees should not grow near enough together to stop cattle, it will be easy to cut rails the right length from tree to tree, placing the ends against the trees and they will soon grow tight.

I think I have forgotten to mention the Locust, which would be one of the very best among the hard wood, and Red Cedar among the Pines.

Maj. WHEELER, of Framingham, believed that where rocks can be obtained stone walls are the cheapest kind of fence. He agreed with the idea that some farms are generally cut up into too small lots. The only advantage in thus sub-dividing the land is to get rid of the stone. He does not think it profitable to keep cattle up and soil them; it costs too much labor, and is too expensive, and he had found that cows would give more milk by being allowed to go into the fields and select their food for themselves. He estimated that a cow will eat 200 lbs. of green fodder a day, and it is too

expensive work to cart this from the field to the barn. He approved of planting southern corn alongside of the pasture, so that it might be used for fodder when the feed begins to grow short. In conclusion, he said a few words commendatory of constructing cellars under barns—and thought the quantity of manure might be doubled by them.

Mr. SHELDON said the southern corn would make more fodder, but it would not produce so much milk as our common corn.

A gentleman inquired if this corn fodder was considered as good for cows as pasture feed.

Maj. WHEELER said that his experience was, that cows would give more milk upon pasture feed than upon any other. This corn fodder he considered next best to grass. The fodder should be given to them at a proper time and in proper quantity. They should have enough so as not to fret after more.

Mr. MOTLEY agreed with the last suggestion. His custom is to feed his fodder to his cattle in the morning. He gives them a good breakfast of it, and then lets them range the pastures to fill up. If they are fed at either noon or night they will acquire the habit of coming to the place where they are fed, and wait and fret for the fodder. He considered corn stalks admirable food for cows. He would cut them early and keep them growing. The wire fence he would recommend as an economical fence, but he thought it had not been tried sufficiently long to test its durability. He gave the items of the expense of a fence of this description put up by him some four years ago and which cost, complete, seventy-three cents a rod. One advantage of this fence is that it is invisible at a certain distance. He coincided with Mr. Tudor's remarks upon the influence of the lattice fences upon the climate, and cited from his own experience, an instance where a similar result had been attained by clearing a small patch of land, in the centre of a wood lot.

The hour for adjourning having arrived, Mr. FRENCH made a few appropriate remarks upon the importance of the meetings and the good they have and do accomplish, and the meeting was then adjourned to the second Thursday evening of January, 1853.

For the New England Farmer.

ONION MAGGOT.

I noticed a short piece in your paper of the 13th ult., written by Ira Brown, requesting to know if there had been any effectual remedy discovered to kill the onion maggot. I would just say that if you make a strong decoction of tobacco, and sprinkle your onions once a week, the maggot will not trouble them, for it is a flyblow which the fly deposits on the top, snug to the growing onion; the tobacco prevents the fly from blowing the top. I saw it tried last season with success, only applied three times.

DANIEL LIGHTON.

Rochester, N. H.

For the New England Farmer.

THE POTATO ROT.

MESSES. EDITORS:—Recent numbers of your journal, as also in fact all the agricultural papers, contain numerous articles upon the plague which seems to have affected the whole potato family. Among so many conflicting theories it would be well if some primary cause could be fixed upon to guide one's researches. My object in writing is to inquire whether the opinion has most obtained, that it is the effect of the climate, or owing to some insect, as I conceive the matter now to have narrowed down to this. It is the opinion of many that both have combined to produce the result.

In a late number of the *American Agriculturist*, in an article from a lady, it was attributed to the ravages of the *Baridius Trinotatus* of Say.

From her statements and what has since fallen under my own observation, I am induced to think that we have at length hit upon the true source of the disease, affected, it may be as I have before said, by some peculiar state of the atmosphere. Any information upon this deeply interesting and important matter that it is in your power to offer would be doubtless received by your numerous readers with satisfaction and pleasure.

Yours, &c.,

W. F. T.

Greenburgh, April, 1852.

REMARKS.—The opinion is generally entertained in this section that the potato rot is caused by atmospheric influences.

For the New England Farmer.

TRANSPLANTING TREES.

BY S. A. SHURTLEFF.

MR. EDITOR:—Much has been said about transplanting trees, and when to do it and how to do it. If all who have written on this subject are correct, it appears to me that it matters but little when or where it is done, or how it is done. But I must beg leave to dissent from the multitude, and speak from actual experience.

I should by all means transplant apple and pear, maple, oak, birch, beach, catalpa, and all other forest trees, except evergreens, in the fall; and peach, quince, cherry, plum and apricot in the spring, as soon as the frost is out of the ground. Evergreens, such as hemlock, white pine and pitch pine, should be planted on the first of May. Firs, spruces and cypresses, in June or July. In all cases we should see to taking up the trees, and also to keep them from the sun, so as to preserve the small roots or mouths; and we should also see to setting them out, and not leave them to hirings. In all cases I would have large holes dug, so that each root may have a good soft bed, and in good soil. If trees are to be planted on high ground and clay soil, they should be set deeper and more loam put around them; but if they are to be set in low ground, they may be put on the top of the ground, and earth from high ground of good quality put around them in sufficient quantity to keep them from blowing about, and to cover the roots well. For in high ground the earth is washing away, and in low ground it is always filling up; and if the roots are too deep in low ground, they will rot; if not set deep in high ground, they will dry and blow over.

The quality of the ground should always be ta-

ken into consideration, whenever an orchard is to be set out. When trees are about to be set, it would be well to make a liquid to dip the roots in of clay and cow dung, of equal parts, and put in water sufficient to make it about as thick as soft-soap. After it is well mixed, dip or soak the roots of each tree fifteen minutes in the composition before setting them. In this way all of the wounds will be dressed, and good rich food will be provided for the young roots. Farmer Jones has set large orchards in this way, without losing a tree.

Too much care cannot be taken in putting out trees or taking them up. I have seen some nurserymen chop off the long roots, and it appeared if they could get up a tree, it mattered not whether they had roots or not, or whether they lived or not, so long as they got their pay for them.

In all cases good rich soil should be put around the roots, and also they should be kept clear of grass and weeds. In some cases it would be advisable to put stones around the roots, to keep them from blowing over, or being loosened by the wind.

S. A. S.

Spring Grove, March, 1852.

SOME REMARKS ON SUBSOIL FLOWING.

BY HENRY F. FRENCH.

DEAR SIR:—Most men believe in *Progress*, in all arts, sciences and pursuits. They believe that they may, themselves, yet learn something, even about the matters of which they already know most. No mechanic believes that his machinery, however complicated or curious, is perfect. He has still some further object, some *Progress* in view.

If his engine now runs thirty miles an hour, he will have it run sixty; and since he has got it to run and to swim, he is next proposing to make it fly.

But the farmer—has he the same hope, the same faith! A few weeks ago, in the course of a conversation upon the importance of a State Commissioner of Agriculture for New Hampshire, among several farmers, one of them,—a man counted sane, and even intelligent among his neighbors, objected,—that it was a useless expense, that there was *nothing more to be learned about farming matters*, and that our farmers knew as well fifty years ago how to raise corn as ever any body will know! Now this, whether it come from a slave in a rice-swamp, or one of “the intelligent yeomanry of the Granite State,” as our politicians usually style their audience, is pure unmitigated ignorance, and yet we occasionally encounter these obstacles in the way of improvement—these old stumps in the way of a clean furrow!

I rejoice to find in the *Journal of Agriculture*, a high stand taken for progress, and a fearless war waged against errors and prejudices, which their age, even, has failed to render respectable.

There are some farmers, not many, still left, who scout all idea of improvement—who believe that the art of husbandry was born, as was Minerva from the head of Jupiter, *full-grown*!

Dogberry, in the play, says that “to read and write comes by nature,” and some men seem to think the same of all knowledge pertaining to agriculture. They put their hand to the plow and look back, to see how their grandfather laid his fur-

rows, instead of *forward*, to see how well they can lay their own.

I am, Sir, somewhat a believer in this new heresy of subsoiling; I say *new*, because I suppose the use of the subsoil plow to be, yet very limited. There are many parts of New England where the use of it would seem almost impossible, such as the stony granite soil of our interior towns, but still, there are parts of almost every farm, where sub-soiling would be found beneficial.

The process may be stated, in a sentence, to be the breaking up of the subsoil without bringing it to the surface, by running a subsoil plow in the furrow of the common plow, to the depth of from one to two feet below the original surface. The benefit to the land is first in loosening the subsoil so as to allow of the ready escape of the surface water, and the free admission of air to the roots of the plants, and this is literally of vital use, because many of our crops, as the potato for instance, perish in a very short time, from a surplus of water in the early part of summer. The permeability of the earth to air, is very surprising. Ewbank, in his “Hydraulics,” states that if a well, in which there is a pump, be sealed tight, upon the sides and top, and the pump be worked, the air will pass down through the ground and bubble up in the bottom of the well! I should think the neighborhood of the well must be pretty thoroughly subsoiled before this would occur; but there can be no doubt that a free circulation of air about their roots, is essential to the growth of most cultivated plants, and nothing so fully obstructs this circulation, as stagnant water. Air rises readily through water, but does not pass through it downward, without considerable pressure.

Again, loosening the subsoil allows the roots to strike deeper, and besides permits the upward passage of water, by *capillary attraction*, and so affords a double protection against drought. The rising of water by capillary attraction is perfectly illustrated by a piece of sponge, laid upon a plate filled with water. The water will rise into the sponge and moisten it throughout, contrary as it might seem to the ordinary principle, that water maintains its level. This same attraction is relied on in the use of flower pots, with holes in the bottom, through which, the water, poured into saucers in which the pots are set, rises in the earth to the surface. But this principle does not apply except to materials of a certain degree of compactness. Water will rise by capillary attraction, in glass tubes, of which the diameter of the bore does not exceed the twenty-fourth of an inch. The principle has similar limitations, as applied to the earth. Fill a flower pot with No. 1 shot, and water will not rise in it on this principle, nor will it rise through clean gravel stones of the same size, except as it may pass through the particles of the stone itself. There may be, therefore, cases where it would not be well to disturb a stratum of very coarse sand or gravel, lest it should be rendered so open as not to hold water by capillary attraction. But this must be a rare and peculiar case. Usually the subsoil is too compact for the free passage of water, either upwards or downwards. A stratum of pure clay or compact gravel, is almost impervious to water, and the top of the ground above it might be parched so as to destroy vegetation, when two feet below, it would be filled with water, which would gladly rise to the sunlight, if

some friendly subsoiler would break up the wall between. Almost any kind of soil may be rammed so hard that water can scarcely penetrate it, and the constant plowing of old fields to a given depth, has this very tendency, to make the subsoil impervious.

Few farmers would expect a crop from a soil of the depth of a common furrow, say five or six inches, if there were a sheet of cast iron underlaying their whole fields at that depth, so that no water could pass down in the spring rains, and none come up in the heat of summer, and no root strike beyond that depth. We should have no hope from such a soil. It would be drowned in the spring and baked in the summer.

I have, myself, used the subsoil plow only upon lands where it is usually supposed to be least beneficial—on a sandy soil so light, that with one yoke of oxen it was run sixteen inches deep. In the severe drought of 1849, I found a manifest advantage in its use, especially upon my corn-field. The drought was so severe as to sear the grass and the leaves of maple trees which had grown well for two years, standing in sward land by the road side, and yet the corn, within ten feet, on the subsoiled land, did not roll once in the whole season, even at mid-day, and there was scarcely another piece in the neighborhood which escaped serious injury. My corn land was manured upon the green sward, which was then turned in with a large plow drawn by two yoke of oxen, followed by the subsoiler drawn by another yoke. I have about nine acres of land which has been subsoiled, on which I have raised all our usual crops, and have growing most luxuriantly, a large number of fruit trees, and I have full faith that whether the season be wet or dry, the process has been essentially beneficial to every acre.

Aside from the mere mechanical effects of subsoiling, the chemical action of the air upon the subsoil, and of the particles of soil upon each other, by change of relative position, is very valuable.

Governor Hill, late of New Hampshire, by the way, a man of progress, and one of the most successful and ardent Agriculturists in our State, called attention, through his "*Farmer's Monthly Visitor*," to the fact that a granite subsoil, from any depth, soon becomes fertile from the action of the atmosphere, and light and heat. Thrown out from our railroad cuttings, it soon becomes covered with a luxuriant growth, in many cases, of red clover.

But I have not time or space to pursue this subject further. Trusting that you may find around you, to sustain you in the manly stand you have taken for the improvement of agriculture, many men like my good old friend Isaac Hill, who was never too old to learn, and had, therefore, always something to teach, I remain

Your friend, HENRY F. FRENCH.

—*Journal of Agriculture.*

☞ Crowded as England is with a hungry population, forty-five per cent. of her soil is not under cultivation. Yet the proportion of cultivated to uncultivated land, is higher in England than in any other country in Europe. In Russia, less than one-fifth of the soil is under cultivation; in Sweden, only one-seventh; in Austria and Holland, one-fifth; in Switzerland, one-fourth; in France, fifty-four hundredths. There is really no need of

emigration. In England, as appears by a parliamentary report, there are sixteen millions of acres, wholly unproductive, that might easily be made productive. The reason why these acres are permitted to lie unimproved is, that as soon as they are enclosed, and before they can be sufficiently reclaimed to produce a paying crop, they become subject to tithe and tax. Hence, only men of large capital dare undertake the task, and they prefer to invest their capital where the return is more speedy and more certain.

For the New England Farmer.

ASPARAGUS AND ITS CULTIVATION.

BY B. F. CUTTER.

This vegetable succeeds best on a deep, rich, sandy loam, where water never can collect in puddles during the winter season. The ground should be prepared for setting the plants by digging trenches four feet apart from centre to centre, and one foot deep by one wide. Well-rotted manure should then be put in to the depth of three or four inches, and mixed and covered with soil. The roots should then be placed in, crowns up, and spread out in their natural position, at the distance of one foot apart on each side of the trench, making two rows in one trench, or 100 plants in 50 feet. They should also be put in alternately, so as not to be opposite each other. They need not at first be covered more than an inch or two, as the soil will naturally get back fast enough during the season, if the ground is well cultivated and kept clear of weeds. With proper cultivation it will do to cut the third year after setting. The beds are prepared afterwards by cutting and clearing off the tops late in autumn, and turning the soil away from the roots with the plow as near down to them as can be done without injury; then put on a good coat of manure, and turn the soil back with the plow, and let it remain till spring, when it should be well mixed by spading or plowing, and harrowing, and the ground levelled with the rake.

The above is the common mode of cultivation, but some do much more. Salt is very good for asparagus, and may safely be used in its cultivation in considerable quantities, by sowing on top of the ground.

B. F. C.

Pelham, April 9, 1852.

REMARKS.—We are obliged to friend CUTTER for his communication and the fine bundle of asparagus roots which came with it. We shall endeavor to do justice to both.

For the New England Farmer.

POTATOES.

The best remedy I have found for the potato rot, and I have had several years' experience in this matter, is to plant early in dry "broke up" ground, without manure or any other stimulant. I had a fine crop of excellent potatoes treated as above last year. They are much better for table use than when raised with manure. The following year I dress the ground high and plant with corn, and get a heavy crop. The next year "lay down" with wheat or oats and grass seed. By this rotation the land is left in good condition for grass for several years. Try it.

JERE FULLERTON.

Raymond, N. H., March, 1852.

*For the New England Farmer.***EXPERIMENTS.**

BY S. FLINT, JR.

MR. EDITOR:—Having seen in a late number of the *New England Farmer*, a few extracts from a letter addressed by me to a friend in Washington. I am emboldened to send a few lines for publication, if you think them worth the room they will occupy in your valuable journal.

It seems to me that farming, both as a science and an art, is yet in its infancy in the United States. When a child first begins to reach after objects, it will stretch out its hand as readily to grasp any thing at the distance of six feet as six inches; and will continue to do so, till it learns by repeated experiments, that some objects are within and others beyond its reach. It surprises nobody that children so often make these futile efforts, but such conduct in a man of mature age would be justly considered good evidence of insanity. What then shall we think of the farmer, who year after year cultivates his fields, with the expectation of a good, or at least of a remunerating crop, and often finds his hopes are blasted! who stretches forth his hand for the harvest and behold! it is not there! Is it not conclusive evidence that he is making experiments! that he has no settled system, that he is beating about like a boy by a trout brook in *hopes* he shall get a bite! What our farmers want at the present time, more than any thing else, is system. We work enough, many of us work too hard, but our blows, like those of the boy who first begins to chop, are many of them lost because they are not well directed.

The question very naturally arises, how shall we get a system? how can we know beforehand where to strike and what to do? Evidently, in no other way than by repeated experiments. Every farmer must make his business a study; and whenever he succeeds in obtaining a good, remunerating crop, he might make a record of it. It would serve as a guide to himself in his future operations; and if communicated to the public, by means of agricultural journals or otherwise, it might furnish hints to others to "go and do likewise." It is not necessary that every man should do this, but it is important that many should; because when a fact in farming is well established, every body will recognize it; just as every school boy admits the fact, that the diameter of a circle to its circumference is nearly as 7 to 22; although he may be entirely ignorant of the geometrical demonstration that proves it. Every farmer who engages in this great work of reducing his business to a system, should keep an exact account of the expense, the mode of producing the amount and value of his crops.

Great crops are sometimes raised and paraded before the public, that cost much more than their value. As, for instance, a man will take a piece of worn out land, and at a great outlay, will get a good crop. The result is told; but before he can be awarded much praise as an agriculturist, he should prove that his boasted crop, or the succeeding crops, will pay the expense; for he is the best farmer, all other things being equal, who keeps his farm in improving condition, and at the same time obtains the greatest income at the least expense. And these experiments should be continued through a great number of years.

Suppose, for instance, that a man were to make the trial, to see whether hay fed to sheep or two years old steers were the most profitable. The experiment of a single year might sometimes be in favor of sheep; because it often happens, that sheep and wool are high in the market when beef is depressed; and for opposite reasons, it might in other single years be more profitable to feed cattle. So the farmer, like the astronomer, must come at some of his facts by a long course of observation; while others can be established more readily. Scientific investigation has already done something; and every intelligent farmer knows that a crop cannot thrive without proper nourishment, any more than his boys can.

"For we shall still take similes
From 'boys' as often as we please."

The fact being well established, that every crop needs suitable nourishment, which nobody at this day will deny, then the great question is, in what manner shall this supply be obtained and imparted to the plant; and this is a question that cannot receive a uniform answer; for in some locations it can be obtained more readily in one way, and in other places in a different way. Consequently, every man must look about and judge for himself. If he sees a neighbor increasing his amount of manure by the use of swamp muck, let him look round on his own premises, and see if he has not, within suitable distance, as good a deposit as his neighbor. I have often wished that I had such a place, and after digging out all the holes that I could conveniently come at, concluded I should have to give it up; although within 40 or 50 rods of my barn there was an inexhaustible supply; but which I supposed could not be made available, because in order to get at it, it was necessary to cross a field of moist land that would be very materially injured at such seasons of the year as is usually devoted to this purpose. Having occasion however to cross it with wood, the first of sledding, the thought occurred to me that it might be dug in the summer or fall, and drawn on a sled without any difficulty; and at a season of the year when it could be very conveniently done—and I intend to make the experiment.

S. F.

Lyme, N. H., 1852.

REMARKS.—We shall soon find room for your other article. Hope to hear from you again.

THE PIG.

Few animals yield less waste matter, after being dressed for market, than the pig: every part is useful, as a sailor would say, from stem to stern; the head for baking, the tail for roasting. Every part is made palatable and useful—feet, minister's face and shanks, are all admired, when properly "soused" and cooked. The rich and poor alike admire a meal from the pluck and portions of the loin; the intestines make excellent envelopes for sausage meat; the blood makes a savory pudding, and the bristles a brush for purposes "too numerous to mention." The pig is a short lived but useful animal; and "works his own passage" through life by mixing muck and making manure for his owner. At death he invariably goes squealing out of his pen into "lard, and pork, and bacon," and is soon off on a voyage at sea in pursuit of a whale.

We never liked the long-legged, slab-sided, apron-eared grunTERS, except for the race course, for the reason that they eat too much food to keep them in decent working order. They might do for a "show" occasionally as fine specimens of a living skeleton, but for porkers give us the short-legged, small-headed, quiet and contented pig, round as an apple and hearty as a buck, with sufficient good sense to know when he has eat enough and where to go and lay down to be rubbed or curried; and, withal, as Uncle Ziba used to say, a "hog, with a remarkably good disposition."—*Vermont Watchman.*

SCARIFYING THE SOIL.

Thousands of the failures which take place among merchants, trades-people and mechanics, are occasioned by "making haste" to be rich. They are not content to pursue a plain, practical system which yields them annually a limited but certain profit, in conducting a small business in the best possible manner. They gradually enlarge the circumference of their operations, spread their capital over a large surface where they can find no return, or only in diminished amount, and thus through the very magnitude of their performances, defeat the object in view—that of making more money—lose their labor, sink their capital, become discouraged and disgusted, abuse the business and knock off for another trial in something else!

We have been led to these remarks and those which follow, by having directed to us several queries in the *British North American*, published at Halifax, Nova Scotia, in relation to scarifying the surface, and making that operation answer the purposes of plowing, and the usual method of tillage, in order to get the land into a suitable condition to produce good crops. An implement called the *scarifier*, is used to considerable extent in England, instead of the plow, but we are not aware that it has ever been introduced into use in this country. If deep plowing, and even sub-soiling are necessary, it is certain that the mere cutting and loosening the surface will never answer the purposes of a good deep tillage.

The farmer is just as apt to run into wrong notions as any other class. He wishes to reap large crops in some other way than by the usual process, some short cut to success, whereby much labor may be saved, and still be able to store full garners in the autumn. So he plows shallow and goes over much ground, and manures on the same principle, and under this process he finds his acres constantly grow poorer, and himself becoming disgusted with farming as a poor thankless business. The text of our provincial friend is as follows:—

"We cannot afford either the labor or the manure necessary for plowing."

There are certain pasture lands, and some of them producing excellent feed, which are altogether too stony for the plow. What is best to be done with such it is difficult to decide. They could

not be scarified much better than plowed; and it is next to impossible to bring such pastures into sweet feed by any process short of plowing. But of one thing we have no doubt—and that is that the sod must be broken so that it will eventually become pulverized and the earth beneath loosened, to admit the air and warmth, before good feed can be obtained. It is a practice on burnt lands where there are many stones, to hoe in the rye. The process is somewhat slow, but excellent crops are obtained under it. We think of no method but this to try on your *very rocky* pasture lands. Take a few square rods and break with the hoe as well as you can, adding a mixture of guano, ashes, plaster and loam, sand, or meadow mud, intimately mingled; keep an exact account of cost, and judge as nearly as you can of the benefits derived. This will test the matter whether the rocky old pastures can be wrought upon with profit.

But the difficulty of our friend does not seem to lie any more with the pasture land than with the mowing fields; and here we have no doubt whatever as to the best course to be pursued. That course is to increase the manure heap until you have enough to give each acre at least fifteen ox cart loads of good manure, and before applying it to plow the land eight to twelve inches deep, spread the manure and cover it in with the cultivator or harrow; sow on twelve quarts of herds' grass, one bushel of red-top, and six or eight pounds of clover seed, to the acre, and you will realize more actual profit from it than you can in any other way. But you reply that you have thirty or forty acres that ought to be plowed this year. Very well—if you have manure for only ten acres, *work that well*, and let the other thirty go to pasture or any thing else. You will get more profit from the ten than by spending your labor and scattering your manure over any larger portion of the whole.

To attempt to cultivate more than you can manage well, is the same hazardous process that the merchant indulges in when he expands his capital too much. It is the rock upon which thousands of merchants, and tens of thousands of farmers, split. They attempt too much—and the temptation grows out of owning or holding too much land. Having the land, they suppose they must cultivate it, and are gradually led into the most imprudent and ruinous modes of cultivation.

AGRICULTURAL GEOLOGY.—We have received from some unknown hand a small book with the above title. It is made up of seventeen articles or brief essays upon the subject mentioned above. We had read them as they appeared from time to time in the papers, and thought them among the best articles we had seen on the subjects discussed. They are written by JOSIAH HOLBROOK, and published by Fielding Lucas, Jr., Baltimore.

For the New England Farmer.

CONGRATULATIONS—COWS—YANKEE INVENTIONS.

BY B. B. FRENCH.

My good friend and brother, you are really doing your brother-men most essential service. You have at last found the very niche that you were born to fill, and how much your native State has lost by not sooner discovering your capacity to stir up and enlighten the farming interest thereof cannot now be calculated! "Better late than never," is an old, but an excellent adage, and now you are in the right place "go ahead" and make up for lost time!

You have asked me, more than once, to write something for the *Farmer*. You know very well that I am neither practically or theoretically a farmer, and therefore I cannot write anything worthy of publication. You and Henry F. French got me into one alliance, if I may so term it, by recommending our friend King, of the *Journal of Agriculture*, to entice me into his columns, and he succeeded. I have written him two letters, such as they are, and do not intend to desert him, if I can find anything in and about Washington that I deem worthy of his excellent journal. So you see I am booked for him, and it is hardly possible that I can find enough here for you both. If I do, you shall have your share. I read both your papers as religiously as I do my Bible, and I think it is a pity if I cannot pick up ideas enough on agriculture from one to write now and then an article for the other! And even now, while I think of it, I will give you a little of my own experience about a matter upon which I read an article in your brother King's last journal, which came yesterday, headed "Knapp's Patent Cow Milkers." Mr. King condemns that invention, and if, as he says, "it is nothing else than the boy's straw," he condemns it very justly. I suppose not one New England boy in one hundred arrives at the age of twenty, without being taught to milk. I was so taught, and have not forgot it to this day. I used to aid in milking my father's cows. Well, about, say thirty years ago, an article went the rounds of the newspapers describing a new invention for milking, and speaking of it in the highest terms. It was, if I remember, the insertion of silver tubes in the orifices of the teats, and thereby drawing off the milk. It not being in my power to procure silver tubes, I resorted to an experiment that none but a Yankee boy would have thought of—I went out and shot half a dozen robins, and of the bones of their legs made tubes, and the cows had not been in the yard ten minutes, after my tubes were ready, before I had the milk running from two or three of them. We all pronounced it a great discovery, and flattered ourselves that milking by the pressure of the teat with the hand was an exploded idea! The new method had been followed less than a week, I believe, when it was discovered that the cows were fast failing to give their usual quantity of milk, and if I remember correctly, some of them began to show symptoms of disease. At any rate the tubes were abandoned, but not until the cows were materially injured; and we all came to the conclusion that the nearest the milking machine resembled the mouth of a calf in its action, the better it was for the cow! And I now predict, that if any one undertakes to milk cows in any other

manner than by the pressure of the hand the cows so milked will soon be ruined.

In one of your papers some time since, you recommend the use of sugar instead of salt petre, in curing hams. A lady of your acquaintance, who imagines she knows something about curing hams, is curious to know whether you have ever tried on your recommendation. She expressed the opinion when she read it, that hams cured without salt-petre, would not be easy of digestion for delicate stomachs! Please enlighten us.

Winter still lingers with us. The grass is beginning to come up, and the buds on the trees are swelling, but nothing except the crocus, which seems to place winter at defiance, gives any immediate prospect of bloom. The apricots, which you have seen in full bloom here in February, do not look as if they would bloom this month. I expect spring will burst upon us in a few days, as it sometimes does, like midsummer, and we shall all be roasted. Now we are sitting by our winter fire, and the church was more uncomfortably cold to-day than I have known it this winter, although the coal stoves were red with heat.

Faithfully yours,

B. B. F.

Washington, D. C., March 7, 1852.

REMARKS.—A pressure of articles already on hand when the above was received, is the reason of its being delayed. We thank our old and steadfast friend for the warm sympathy and kind expressions in a portion of his letter which we deem sacred to friendship and the still nearer and dearer ties existing between us. They lead us back through the long years that have departed, to scenes and enjoyments which never can be erased from the memory.

Our correspondent is diffident about his farming knowledge; but one thing is certain—he has "*tended a saw mill*" more than we ever did, and must be qualified to write a luminous chapter on that subject. We can assure the dear black-eyed lady, the friend and companion of our youth, who has always been doing good, curing the hams, educating the children, &c., that we have used no salt-petre for some years in curing meat of any kind, and that the old Virginia, Maryland, or West-phalia hams, do not come quite up to the tender, juicy deliciousness, of those that are frequently upon our table.

HOW CITIES EXHAUST THE FERTILITY OF LAND.

There has been enough of the elements of bread and meat, wool and cotton, drawn from the surface of the earth, sent to London and buried in the ground, or washed into the Thames, to feed and clothe the entire population of the world for a century, under a wise system of agriculture and Horticulture. Down to this day, great cities have ever been the worst desolators of the earth. It is for this that they have been so frequently buried many feet beneath the rubbish of their idols of brick, stone and mortar, to be exhumed in after years by some antiquarian Layard. Their inhabitants violated the laws of nature, which govern the health of man and secure the enduring pro-

ductiveness of the soil. How few comprehend the fact that it is only the elements of bread and meat, evolved during the decomposition of some vegetable or animal substance, that poison the air taken into human lungs, and the water that enters the human system, in daily food and drink! These generate pestilence, and bring millions prematurely to their graves.

Why should the precious atoms of potash, which organized the starch in all the flour, meal, and potatoes consumed in the cities of the United States in the year 1850, be lost forever to the world! Can a man create a new atom of potash or of phosphorus when the supply fails in the soil, as fail it must under our present system of farm economy! Many a broad desert in Eastern Asia once gladdened the husbandman with golden harvests. While America is the only country on the globe where every human being has enough to eat, and millions are coming here for bread, how long shall we continue to impoverish ninety-nine acres in a hundred of all that we cultivate! Both pestilence and famine are the offspring of ignorance. Rural science is not a mere plaything for the amusement of grown up children. It is a new revelation of the wisdom and goodness of Providence, a humanizing power which is destined to elevate man an immeasurable distance above his present condition. To achieve this result, the light of science must not be confined to colleges; it must enter and illuminate the dwelling of every farmer and mechanic. The knowledge of the few, no matter how profound, nor how brilliant, can never compensate for the loss sustained by neglecting to develop the intellect of the many.

No government should be wanting in sympathy with the people, whether the object be the prevention of disease, the improvement of land, or the education of the masses. One per cent. of the money now annually lost by reason of popular ignorance, would suffice to remove that ignorance.

—Anon.

For the New England Farmer.

PROFITS OF POULTRY.

MR. BROWN:—As I have seen many statements in regard to the profits of poultry, I made a trial on mine the past year, ending March 1, 1852. I commenced with 15 hens and a protector. I raised 265 chickens, which I sent to Boston market, excepting 30 of the pullets, which I kept through the winter. My hens laid, from March 1 to October 1, 804 eggs; from October to March, 1284. Total, 2088 eggs.

Whole amount sold from hens.....	\$142.37
30 hens at 62½ cents, retained.....	18.75
One cord of manure.....	4.00
	<hr/>
	\$165.12
Cost of keeping.....	93.61
	<hr/>
Net gain.....	\$71.51

My hens are a cross of the Cochinchina and our native breed. I will give you my method of keeping. I feed my hens once a day with dough made from corn and cob meal mixed with boiling hot water, and once a day I give them oats. I give them some kind of animal food three or four times a week. Also, keep something constantly before them for making the shell.

Truly yours,
T. MORTIMER B. BOTT.
Southboro', March 10, 1852.

For the New England Farmer.

THE HISTORY OF THE APPLE TREE.

BY S. P. FOWLER.

[CONTINUED.]

The first agricultural work published in this country, was entitled "Essays on Field Husbandry," by Jared Elliot, printed in 1760.

But little was written in this country on the cultivation of fruit trees, prior to the year 1817. At this period Mr. Cox wrote his views of the culture of fruit trees in the United States of America. Dr. Thacher published his American Orchardist in 1821. These treatises, although valuable, particularly the one written by Dr. Thacher, recommend the open and severe method of pruning, prevalent in England, by cutting out a good portion of the branches, in order to admit the rays of the sun, and a circulation of air. This system, adopted by English cultivators, and practised in this country for many years, is now to a considerable extent abandoned, it being not necessary in our sunny climate. Thirty years since, we were accustomed to derive much of our information in regard to the cultivation of fruit trees from English writers on this subject. In regard to the time of pruning, cultivators disagree. And to show this disagreement, we shall give the opinion of some of them. Mr. Hovey, in his horticultural operations for February, 1850, published in his magazine, says pruning orchards may be commenced now, choosing good weather for the work; by beginning now, much valuable labor will be saved. It should all be accomplished before April. The *American Farmer's Encyclopedia* says, trees ought not to be pruned in February and March; this is the season when most trees bleed most copiously and injuriously. It causes canker, the wounds turn black, and the bark, for perhaps several feet below, becomes equally black, and perfectly dead in consequence of bleeding. Downing says, we should especially avoid pruning at that period in spring when the buds are swelling, and the sap is in full flow; it brings on a serious and incurable canker. From moderate pruning, which alone is generally needful, says Kenrick, June and July, during the longest days of summer, is the very best time, for wounds of all kinds heal admirably at this period. Thomas says, thinning out the heads of old trees, or heading back for grafting, may be performed in autumn or winter. Lindley, in his *Theory of Horticulture*, says, the season for pruning is usually midwinter, or at midsummer; the latter, for removing new superfluous branches; the former, for thinning and arranging the several parts of the tree. Manning, in his book of fruits, says fruit trees, in this latitude, should not be pruned in the fall or winter, or before the sap is in motion, as they are at those times exceedingly apt to canker. The proper season for pruning, we consider, is immediately upon the swelling of the buds, or expanding of the leaves, as at this time the sap being in vigorous motion, the wounds soon heal over. Cole, in his fruit book, says moderate pruning should be done in June, July, or August, though it will answer very well till December. If trees are pruned in July, August or September, the wood will become hard, sound, and well-seasoned, and commence healing over. We should prefer October, November, or even December, to the spring, which is the worst season. Loudon says, for all the operations of pruning,

which are performed on the branches or shoots of trees, it would appear the period immediately before, or commensurate with the rising of the sap, is the best. Barry says, we are not permitted to be very definite on the point of pruning. In western New York, we prune apple, pear, and other hardy fruits, as soon as our severe frosts are over, say the latter end of February or beginning of March.

Dr. Thacher says, in general the months of February, and March, have been considered as the preferable season for pruning. Forsyth says, the best season for pruning apple trees in England, is in the month of April or May. Whenever the apple tree needs heavy pruning, says Jaques, the work may be done at any time from the latter part of autumn till early in spring. Col. Pickering's practice was, to prune in the spring, when the buds had scarcely begun to swell, and ending before the expansion of the leaves.

We see from the many quotations we have made from persons who have written upon the subject of pruning, that a great variety of opinions prevail. We are of the opinion, it may be done successfully, at most seasons of the year, if care be taken to perform it well, and immediately apply a composition, or paint, perhaps several times repeated, in some cases, to the wounds caused by the operation. With some persons, the rule is to prune when they have leisure, and their tools are sharp. For many years, fruit trees have been pruned in Massachusetts, in the spring months. This was the universal practice of our ancestors. It can be done perhaps more conveniently at that season, than at any other period. It is in the spring that we devote the most time to the cultivation of our fruit trees. In summer and autumn, farmers are busy with other occupations. In the winter months, should there be mild weather, fruit trees can be pruned to advantage. When performed at this season on trees planted in ground laid down to grain or grass, you do not injure the crops, as you would seriously do, if you pruned in June. We have never pruned our trees more easily or safely, than when we have done it on the hard crust of a deep snow, in February or March. After all that has been said or written upon the proper season for pruning, farmers will continue to prune very much as they have done. Much can be said, as we have seen, on both sides of the subject.

S. P. F.

Danvers, New Mills, January 23, 1852.

[TO BE CONTINUED.]

For the New England Farmer.

STONE BARN.

MR. BROWN:—I wish to obtain through your paper some information concerning stone barns, built of common field stone, laid in mortar of lime and cement. I wish to ascertain whether the walls will accumulate moisture sufficient to injure hay. Knowing that your paper has an extensive circulation, I thought it might fall into the hands of some one who has a barn of this description, who could impart the desired information, and you will oblige a subscriber.

A.

Winchester, March 22, 1852.

The gem cannot be polished except by friction, nor man perfected but by adversity.

BRIEF HINTS.

Potatoes designed for planting, and especially for early use, should be taken from the cellar and spread upon some floor where the sun may fall upon them part of the time. They will vegetate much more readily, and can be brought to maturity earlier by so doing. A few could be started in the hot-bed or by placing them in a warm situation and covering them with horse manure.

If you want good radishes, spade in a good quantity of manure, so as to make the ground light and rich. They will then grow rapidly, and of course be tender and nice. You can have them in this way, without the trouble of mixing half sand with the soil, as some old cultivators contend.

In setting young trees, after the holes are dug, make a little "hill" in the hole upon which to stand the tree. Press and work it down so as to fill up perfectly among the roots on the under side, that there may be no vacuums or hollows.

Recollect that the high price of butter is owing, in a great measure, to the vast amount of poor butter. If it were not for the tons of rancid, worthless butter, we should not hear of its being sold at 37 1-2 cents per pound. The remedy is very simple, *work out all the buttermilk!*

Farmers are mostly agreed in the opinion that small potatoes are just as good for seed as the larger ones. But as the "eyes" are the germ of the plant, and as a small potato may have nearly the same number of these that the larger have, care must be taken not to seed too highly. High seeding will certainly produce a small crop of small potatoes.

For the New England Farmer.

RENOVATING OLD APPLE TREES.

BY DANIEL IELAND.

In your paper of the 28th of February last, your correspondent, S. P. Fowler, speaking of old cider apple trees, says "the question is often asked what can I do to renovate these old trees, and make them produce good fruit? Will grafting them answer a good purpose, and will scions do well in these old limbs?" In answer I would say, as a general rule, it is labor lost to graft these old tops."

I know not the writer of the article, nor do I know whether he has come to the above conclusion from theory or practice; the writer of this article has come to a different conclusion, and my opinion has been formed from practical experience.

With the exception of two years, 1803-4, I have spent my days upon a farm left me by my father, and he was early engaged in raising an orchard; consequently I came in possession of one raised by my grandfather and father. Many kinds of fruit raised by them was not as good as some kinds which have come into notice in later years.

One very fine table apple, which had its origin in Sherburne, bore well for a number of years, and was highly esteemed by all, did well until 1810;

since that time it has not been worth cultivating. As I had a hundred or more trees of that kind of apple, I tried many experiments on them, but could do nothing to make the fruit grow fair as it formerly did.

In 1805, I began to take care of the orchard which my father had previously cultivated, and from that time to 1847, I have had the care of an orchard of from seven hundred to a thousand trees, and have tarred seven hundred trees for a fortnight to keep the canker worms down. As I had a great number of old trees that did not produce good fruit, I began forty years since to graft over large trees that would take from thirty to one hundred scions, and sometimes more to each tree. I think I may say I have never failed to be well paid for my labor.

I made an experiment some twenty years since on an old apple tree; the trunk was rotten and hollow, and our girls used to go and get the rotten earth from it to put in their flower pots. I pruned and grafted it, and it has borne well to the present time, although so far decayed as no one would think it could be made to bear good fruit.

The all important question is, to *know how to do it*, how to manage these old trees, with some dry limbs and full of sprouts, and perhaps on land that never was cultivated at any time. With your leave I will at some future time give you my method of pruning, grafting, &c., as I have not the time now to devote to it, which is necessary.

Yours respectfully,

D. L.

Sherburne, March 19, 1852.

N. B. Since the above was written, I have read Mr. Morrison's remarks, upon the same subject, which I consider generally correct. But in one respect I differ from him, which, should I say anything further, I should take the liberty to state.

REMARKS.—We are strongly in favor of pruning and scraping all the old apple trees, then of grafting and cultivating them. Why, we would not cut one of them down sooner than we would any other old friend, so long as life was evident in its familiar old trunk and limbs. Look at the old representative of other years! Your daughters gathered the fine, rich mould from its decaying trunk long before they were married, to support the plants which decorated your parlor windows; and now *their children* are regaling themselves upon fruit which drops from its new and vigorous branches, and you enjoy their gambols while reclining in its shade. So long as there is a vigorous shell of an inch thickness, do not give up an old tree. We hope to hear from our correspondent again.

For the New England Farmer.

IS IT SO?

MR. BROWN:—I wish to call your attention to an assertion in the Jan. No. of the *N. E. Farmer*, which I think is an error. You say on page 10th, "men and horses, only, sweat, so say the medical men," &c.

Now, sir, I am aware that "medical men" understand more about physiology than farmers generally, but still they are not infallible.

I have always believed that oxen and cows sweat; and the reason why I have believed so was, I have very often in hot weather seen them entirely covered with moisture; sometimes to that degree that the coat appeared completely saturated. This could not, I think, be condensed vapor, for the body of the animal at the time would be quite too warm for that; so, that unless it can be proved to the contrary, I shall affirm that oxen sweat as well as "men and horses."

L. B. P.

Worcester, Vt., 1852.

REMARKS.—Dr. Vandenberg must settle this matter with our correspondent.

SPRING WHEAT.

This grain is already very important to large farming districts in Pennsylvania, and may most profitably be cultivated in many parts of the State where winter wheat in a great measure fails. The objections urged against it generally, are three. 1. That it is inferior in quality. 2. That it is liable to smut; and 3. That it is an uncertain crop, owing to its being so frequently blighted and shrunk by mildew. But from an experience and examinations of seven years I am convinced that these objections are not well grounded. As in all crops, the quality depends much upon cultivation. With good cultivation the Italian wheat weighs sixty to sixty-two pounds and yields forty to forty-three pounds of superfine flour to the bushel. The flour, although not quite as white, makes as good bread as any winter wheat. It has usually a slight yellowish tinge. If wheat were not *too much* judged of by the whiteness of its flour, I doubt not that good Italian wheat would soon rank as high in the market as Mediterranean winter wheat.

The second objection is entirely obviated by a proper preparation of the seed. I have had no smut for twenty years except where I have sown wheat without washing and liming. My process is to wash my wheat thoroughly in strong lime, which raises to the surface all oats and other light seeds, which are skimmed off. While wet it is thrown upon the barn floor and finely pulverized, quick lime in small quantities is sifted over it. The whole is so mixed that every kernel is coated with lime. It may safely be left in this way for several days before sowing. If sown immediately, the lime is unpleasant to the hand, and to prevent its injuring the sower a small quantity of gypsum is scattered over it. No smut is ever found in spring wheat prepared in this manner. The salt, lime and gypsum are all admirable manures.

The third objection is obviated by early sowing. In large districts in the northern part of the State it is difficult to plow early. The soil is a heavy clay and loam and retains the water very long. It is absolute ruin to the crop to plow while wet, and consequently the farmer who relies upon spring plowing for his wheat will be unable to sow before the last of April or the first of May—a month too late here. The plowing must be done in the fall and the sowing at the earliest practicable day after the frost is out of the ground. The best spring wheat in quantity and quality, which I have ever known raised, was upon a green sward, which had been turned under late in November and upon which the wheat was sown without further plowing, the latter days of March. A very light dra-

ging lengthwise of the furrow before sowing, and the wheat was lightly dragged in so as not to raise the sod. Sown in this way it will be fit to harvest the latter part of July. Wheat which ripens in July is seldom affected by mildew. Two bushels of seed should be sown per acre.

I have tried the Baltic wheat, which is said to be successfully cultivated in Vermont, but it is greatly inferior in quality as well as quantity to the Italian.—*Granite Farmer.*

For the New England Farmer.

HOGS.

It is an old adage that "a sick pig is sure to die," but there are exceptions to all general rules, as the sequel will prove. I had a fine lot of pigs about three months old, which had been confined in a pen where they had no access to the earth since they were a week old, all of which appeared in good health until a few days since, when one morning on feeding them, one, while eating, fell down apparently in a fit; his breathing was scarcely perceptible. After a few minutes he began to recover and to breathe not unlike a horse severely afflicted with the heaves, but soon appeared entirely recovered and ate as usual. The next day he had another attack, but much more severe than the first; these continued daily for four days, when he died. Having in my possession several volumes of the *Albany Cultivator*, I examined them, but did not notice any thing that applied to this case. Soon two others were attacked in the same manner, when I bled them by cutting a slit in the ear, and cutting off a piece of the tail. On examining their bed it was found very wet and uncomfortable. Dry straw was substituted, and the pen opened so that they could pass out and in as they pleased. It was observed that they spent a great part of the time, after being permitted to go at large, at a pile of old wood which had been recently cut and lay near the pen; this excited sufficient curiosity to notice more particularly the reason of this choice of location, which was found to be the great quantities of decayed or rotten wood which lay scattered about the pile, and which they ate immoderate quantities. Perhaps it should be mentioned, that they were not fed for several days after being let out of the pen. The pigs, however, have entirely recovered.

Having but recently engaged in farming, I took the liberty to inquire of some of our best farmers in regard to the disease, and they pronounced it what is commonly known in this section of the country as the *Thumps*. One of my friends informed me he had lost several last spring, and had cured several. His method is as follows:—As soon as the pig is attacked, take a sharp knife and make a severe cut entirely to the bone directly between the eyes, about three or four inches in length, and put in a mixture, in equal quantities, of black pepper and salt, and give the animal three or four days in succession one-sixth part of a teaspoonful of antimony mixed in a soft mash of bran and water; as the antimony is liable to settle at the bottom, it is well to stir it at short intervals while the pig is eating, that it may be well mixed with the food. I have nothing to say as to cause or effect, but give the simple facts, and let every reader draw his own inferences.

P. S. B.

Salisbury, Feb. 13, 1852.

REMARKS.—As the sick pigs of our correspondent recovered by being permitted to come to the ground, he will probably never split their heads open as a remedy. We hope none of his neighbors ever will. These rash experiments are cruel and dangerous. When the pig rushes furiously about the pen and strikes his head and nose against its sides, it is quite evident that the brain is affected; but it would seem about as rational to us, to apply a blister to the end of a cow's tail for a dislocated hip, as to "cut a slit in a hog's head entirely to the bone, about three or four inches long, directly between the eyes, and fill it with black pepper and salt." A milder and better course would be, when the paroxysm has subsided, to let the poor beast loose and drive or lead him gently to running water, a brook or pond, and his own instinct will teach him how to allay the inflammation which is raging in his system. A stout hog is an uncomfortable patient, and nostrums, of any kind, are of little service. An ounce of prevention is worth a good deal more than a pound of cure with the hog. Swine are rarely sick, if properly managed. They require regular feeding, both as to time and quantity, salt in their food two or three times a week, and what is absolutely indispensable to profit, a dry and warm place to lie in. They should have grass, or other green and succulent food, in the summer, and access to the fresh earth always. If your pig has not already contracted disease, he will remain healthy, and afford a profit under such treatment as we have described above.

TRANSPLANTING, BUDDING AND GRAFTING.

In the agricultural department of the Patent Office Report for 1850—51, is a large amount of practical agricultural information. Gershom Wilborn, of Essex County, Mass., communicates the following upon Transplanting, Budding and Grafting:—

Transplanting.—Land to be set with fruit trees should be plowed in the fall, or very early in the spring; it should be plowed very deep or subsoiled. When the ground is quite ready, get your trees, and set them the same day if you can; never buy trees that have been dug over winter, and "lain by the heel," nor plant so late in the season as when the leaves have started: trees of this kind may live, but you lose the growth of them the first season, whereas, by the right kind of management, transplanting will hardly put them back at all. I have often planted trees which grew four feet the first year. Holes should be dug of sufficient width and depth to extend the roots to their original capacity. When the trees are placed in the holes, spread out the lower roots and cover them with fine earth, as also all the rest in like manner; get the roots into the earth so that they will stand interspersed, in regular system, with the soil, as the roots of a growing tree always do. The practice of thrusting the roots of a tree all in a heap, then piling on hard earth, manure, &c., and stamping it down hard, is sometimes successful, but no sci-

entific cultivator would recommend it. After trees are set, the ground should be stirred around them while the heat of the season lasts, as often as once in two or three weeks; and if great drought should prevail, they should be occasionally watered; this should be done by making holes with a stick among the roots, and then pour on a pail of water.

Budding.—Apple trees, and all others except plums and cherries, should be budded in the latter part of July or the first of August; they should be put in so late that they will not grow the same season. The plan of operation is to select a shoot of the present season, with good buds, and cut off each leaf within half an inch of the leaf-stalk; then hold the shoot in the left hand, and the knife in the right; the lower part of the blade is placed on the shoot about half an inch above the bud—the thumb of the right hand rests on the shoot at the lower extremity of the bark to be removed with the bud; the knife is then drawn towards you, parallel with the shoot, smooth and level, so that the bark and a portion of the wood will be taken off. The stock to be budded should be of the present year's growth—a T should be made in the bark with the knife, and the bark raised with some convenient instrument; the bud is then inserted, and the bark is brought back and tied over the bud, letting the leaf-stalk project out of the stem in the bark.

Grafting.—Grafting is performed in the spring. The last of March is the proper time for plums and cherries; and April for all others. In grafting, thrifty young stocks should be preferred. The operation is simple, and consists in cutting off the stock at the point where we wish to insert the scion, and splitting the stock down the centre; the scion is cut at its lower end, in the form of a wedge, and inserted in a split in the stalk; the outside bark of the scion should fit nicely the bark on the stalk. A salve made of 1 pound beeswax, 6 of rosin, melted with 1 pint linseed-oil, is then used to cover the seams made in the operation, so as to render the whole air-tight: the salve should be looked to occasionally, and kept smooth and tight on the seams, for it sometimes gets open and lets in the air, which will destroy the scion. Scions should be of the last year's growth, and have upon each two or three buds.

REMARKS.—The above article is as concise and practical as can be desired by any one who wishes to bud, graft or transplant. We should think the proportion of rosin given too large; but a little experience will enable you to temper your grafting wax to suit. The ingredients are of the right kind.

SOWING SEED.—Farmers, as well as other people, like to make good bargains, and we like to have them, especially when they buy a year's paper of us, and pay for it in advance. But that is not the bargain we are going to write about. It is the sowing of grass seed. If you would make a good bargain with mother earth, give her a plenty of seed. If you scrimp her, you cheat yourself and cheat your earth, and are guilty of double dishonesty. If you undertake to save five dollars in seed, you will lose twenty dollars in hay and pasture. Be wise, then, and sow bountifully, and you shall gather bountifully, and make a good bargain.—*Vermont State Journal*.

THE FARMER'S CREED.

We believe in small farms and thorough cultivation. The soil loves to eat, as well as its owners, and ought therefore to be nurtured.

We believe in large crops, which leave the land better than they found it—making both the farm and farmer rich at once.

We believe in going to the bottom of things, and therefore in deep plowing, and enough of it—all the better if with a subsoil plow.

We believe that the best fertility of any soil is the spirit of industry, enterprise, and intelligence—without this, lime and gypsum, bones and green manure, marl or plaster, will be of little use.

We believe in a clean kitchen, a neat wife in it, a spinning-piano, a clean cup-board, dairy, and conscience.

We firmly disbelieve in farmers that will not improve; in farms that grow poor every year; in starved cattle; in farmers' boys turning into clerks and merchants; in farmers' daughters unwilling to work; and in all farmers who are ashamed of their vocation.

HINTS ON FRUIT ROOMS.

BY M. P. WILDER, BOSTON.

We extract by permission, from a private letter of January last, from Hon. M. P. WILDER, the following notes regarding the construction of a fruit-room, which will interest many of our fruit growers.—Ed.

My fruits are keeping admirably in the new fruit-room. This room happens to have been situated and constructed so much like Mr. Morrison's, (of which you have seen the drawings and description in the *Gardener's Chronicle*), as to be almost a fac-simile of his.

The walls of mine, however, are filled in with charcoal and sawdust.

The *Beurre Diel*, *Vicar of Winkfield*, *Excellensissima*, and other autumn pears, are now in as perfect condition as when gathered from the trees, and so they will remain till the warm weather of spring approaches. I shall then try some of them in the non-conducting boxes, where I think they may be kept till summer. I have, by a similar process, preserved some varieties till July. Mr. Morrison has no new principle. All that is necessary, is to obtain a low temperature during the warm weather of autumn, and to preserve this equilibrium. This being attained, there is no difficulty whatever. When the severe weather of last month occurred, my fruits were removed from the shelves and packed in boxes, with a thin layer of clean rye straw between each tier, the tubes of the straw containing air enough to correct mildew and damp. The boxes are now piled on one side of the room, and covered with hay about three feet in depth.

My experiment was suggested by the bad effects of moisture and warmth in my old fruit cellars, under my dwelling-house, and the same difficulty exists with rooms on the ground-floor of buildings. I therefore resorted to the other extreme—a cool and dry chamber on the north end of my barn, the location of which you know, (and like Mr. Morrison's,) over the carriage room. I am now quite satisfied that we have at last ascertained the proper location for a fruit-room; namely, a cool upper apartment, with lined non-conducting walls.—*Horticulturist*.

SHORT HORN, OR DURHAM BULL.

Under the term *Short Horned cattle* are included the *Holderness* and *Teeswater* breeds, which were supposed to have derived their origin from a cross with some large bulls that were imported, nearly a century ago, from Holland into Yorkshire, in England. The cattle are of good size, and are beautifully mottled with red spots upon a white ground; their backs are level; the throat clean; the neck fine, but not too thin, especially towards the shoulder; the carcass full and round; the quarters long; and the hips and rump even and wide. That this breed is excellent for the shambles, is generally conceded. We would not say that they are the best milkers, though we have known some that it would be difficult to beat, and some excellent dairymen give them the preference. But recently the Devons and Ayrshires seem to have more of the public favor as milkers.

Our engraving represents a Durham Bull, "Earl Seaham," the property of Messrs. Sherwood & Stevens, which received a prize at the State Fair in New York last autumn, and is a well-proportioned, fine looking animal.

For the New England Farmer.

COWS GIVING BLOODY MILK.

I have had cows give bloody milk, and have invariably effected a cure by giving a table spoonful of saltpetre two or three days in succession.

JERE FULLERTON.

Raymond, N. H., March, 1852.

For the New England Farmer.

CAUSE AND CURE OF POTATO ROT.

MR. EDITOR:—As it is drawing near the time of putting the seed into the earth, I would call the attention of your numerous readers, to an article dated Sept. 15, 1851, headed, "Cause and Cure of the Potato Rot," inserted in your columns first of November, 1851. As some have pretended to be the first discoverer of the same remedy, something like two months after the publishing of my article, it puts me in mind of a man who went to a neighboring town, and saw a peat fork, and on his return home caused one to be made and claimed to be the inventor.

Yours, &c.

I. N. MERRILL.

SIX TONS TO THE ACRE.—Take a first rate piece of land, Mr. New York Farmer, plow it sixteen inches deep, spread on twenty-five loads of good and well-composted manure; plow that in, three to six inches deep, level and sow twelve quarts of herd's grass, one bushel of red top and six pounds of clover seed to the acre, and with heaven's blessing upon it, if you don't get six tons to the acre in two cuttings, why then you won't get as much as we believe Mr. CLAPP, of Greenfield, did, to whose statement you refer, and which we heard and reported in these columns. It's a large crop, sir, but it is often produced in this "cold and barren New England." There is nothing like KNOWING HOW.

✂ The Vermont State Agricultural Society will hold their Annual Exhibition at Rutland, on the 1st, 2d and 3d days of September next.

For the New England Farmer.

SELECTION OF FRUITS.

BY GEORGE JAKUES.

I noticed in the last number of the weekly *Farmer* a half-dozen quince-rooted and a half-dozen pear rooted pears recommended for general cultivation. Considering that this recommendation was based upon "the authority of two or three of the most distinguished horticulturists of New England," I was surprised to find the *Passe Colmar* inserted in the first list, and the *Bartlett* omitted in the second. For myself, I should hardly venture to recommend the *Passe Colmar* in a list of less than twelve or fifteen varieties on quince; and as for the *Bartlett*, I should not venture to omit it in the smallest number of standard (or pear-rooted) trees. However, I will not find fault without attempting to furnish a substitute, and so I submit to your and your readers' criticism my two lists of six pears for each mode of cultivation.

PEARS ON QUINCE.

NAME.	TIME OF RIPENING.
1. Beurre d'Amalis.....	September.
2. Louise Bonne de Jersey.....	Sept. and Oct.
3. Urbaniste.....	Oct. to Nov.
4. Duchesse d'Angouleme.....	November.
5. Beurre Diel.....	Nov. and Dec.
6. Glout Morceau.....	Dec. and Jan.

Were I to increase the number to nine, I would add Golden Beurre of Bilboa, (Sept. ;) St. Michael, (Oct. ;) Vicar of Winkfield, (Nov. and Dec.,) &c.

PEARS ON PEAR-ROOTS.

NAME.	TIME OF RIPENING.
1. Rooteizer.....	Aug. and Sept.
2. Bartlett.....	September (early.)
3. Flemish Beauty.....	September (late.)
4. Seckel.....	October.
5. Dix.....	Oct. and Nov.
6. Beurre d'Arenberg.....	Dec. and Jan.

Extending the list, I would add,—

7. Madeleine.....	August.
8. Andrews.....	September.
9. Belle Lucrative.....	September.
10. Louise Bonne de Jersey.....	Sept. and Oct.
11. Urbaniste.....	Oct. and Nov.
12. Winter Nellis.....	Dec. and Jan.

Adding still farther such as promise remarkably well, I would name,—

13. Paradiso d'Automne.....	Sept. and Oct.
14. Swan's Orange, or Onondaga.....	Oct. and Nov.
15. Beurre Langlier.....	Dec. and Jan.

There are a great number of other pears of much excellence; but, as the Frenchman affirmed, "too many is no better than enough," and therefore I will not at present extend the list.

Of the pears above recommended, the trees grow vigorously, and are hardy and productive. The fruits are of the finest dessert varieties, and ripen successively, so as to afford an almost constant supply through the year. From my own experience, however, I find it much easier to recommend what are excellent than what are the most excellent of pears or other fruits.

Now I am writing, I will remark, that being restricted so as to be permitted to have but six apple trees, each of a different dessert variety,—growth, productiveness, home and market value of fruit, &c., all taken into account, I would choose, as at present advised,—

NAME.	TIME OF RIPENING.
1. Porter.....	Sept. and Oct.
2. Gravenstein.....	October.
3. Hubbardston Nonsuch.....	Nov. to Feb.
4. R. I. Greening.....	Nov. to March.
5. Baldwin.....	Dec. to March.
6. Roxbury Russet.....	March to June.

The best four sweetings, perhaps, are,—

1. Large Early Bough.....	August.
2. Jersey Sweeting.....	Sept. and Oct.
3. Danvers Winter.....	Nov. to April.
4. Ladies' Sweeting.....	Jan. to May.

Nos. 2 and 4, however, have as yet been hardly sufficiently tested in our climate. The number of first-rate varieties of sweetings still continues to be quite small.

The best three cherries are those recommended by Col. WILDER:—May Duke, (early;) Black Tartarian, (a little later;) Downer's Late, (a little later still.)

The best half-dozen plums are none at all, at least in this vicinity.

The best advice, in all fruit matters, is one's own observation and experience.

Truly yours,

G. J.

Worcester, April 12, 1852.

REMARKS.—"Who shall decide when doctors disagree?" Of ourselves, we have no great confidence in selecting choice fruits, and are always glad to defer to others whose experience has been very extensive, and whose skill can scarcely be doubted. But fruits vary materially on different soils and in different locations; so that good judges, even, come to different opinions in regard to the same fruit. At a late agricultural meeting at the State House when the subject of discussion was *fruits and fruit trees*, Col. WILDER and Mr. FRENCH, both recommended the Rhode Island Greening, and now our esteemed correspondent includes it in his list. Now if we were about to recommend a list of choice apples, this fruit would not find a place in it, for the reason that with ourselves, and in our vicinity, it is almost worthless; running to a dense and beautiful foliage, and when bearing dropping its fruit prematurely. But in other locations it is an excellent and profitable variety. We thank our correspondent for this timely contribution to our columns, and improve the earliest moment to give his opinions publicity.

PRESERVING HAMS.—While writing, and as it is the season of the year for securing smoked ham, or other meat, from the flies and bugs during the summer, I will give my plan for the same. After having the hams properly smoked I pack them down in coarse rock salt in a box, or cask of suitable size, covering everything well with the salt; they keep clean, cool and dry, and most perfectly secure from insects of every kind. The same salt is not injured and answers for pork in the fall, so that no loss is sustained. I have tried many experiments heretofore in keeping hams; but my present method is decidedly the best and the least trouble. Respectfully yours, &c.,

A. Y. MOORE.

—Michigan Farmer.

THE SPINDLE CITY and MIDDLESEX FARMER, published at Lowell, Mass., has an Agricultural Department conducted by Mr. L. H. HILDRETH. It has well-written editorials and will help the good cause in Old Middlesex.

REPLIES TO CORRESPONDENTS.

W. B. W., *Gilford*.—In answer to your inquiries whether "there is a patent on our Poultry Feeder," we reply that there is not. It was designed and made to meet our own wants, and more than answers every expectation we had indulged in. Though made with our own hands, we cannot explain to you on paper how it was done.

The feeder is two feet square on the bottom, two feet high, and the large part of the upper hopper sixteen inches square. In the engraving one of the doors is open, because the weight of the fowl has opened it in stepping upon the lattice. When she steps off, the door will fall by its own weight and have the same appearance as the one on the left hand of the engraving. The two outside rails of the lattice work come square to the end of the bottom, and are fastened there by wire snipe-bill hinges; the centre rail runs into the hopper far enough to go nearly to the back side of the door. On the top of the rail, near the end, a wooden peg is inserted, with a small wheel in the end of the peg, as will be seen in the engraving. When the fowl steps upon the rack and presses it down, the wheel strikes the door and raises it—when she steps off the door falls, and the grain is secure.

J. V., *Woodstock, N. H.*—To find the information you desire, we would refer you to a report on Fruits by Col. WILDER, made to the Legislative Agricultural Society, which may be found in this number.

SUBSCRIBER, *Sanbornton, N. H.*, shall soon have as full a reply as we can find time to make.

W. M. P., *Montague*.—Thanks for your good opinion of us. We shall be active at our post—heart and hand are there, you may rely upon it. With such words as yours, and substantial tokens as your letter contained, we shall urge our way onward rejoicing.

Cut the bark of your trees smooth and square above and below where the mice have girdled them, then take two or three pieces of bark from a healthy tree and press it in closely in a perpendicular position; wind any old cotton cloth about the wound and bank the earth over it. Your tree will live, grow, and thank you for your pains.

M. H., *Barnstable*.—Leached ashes are excellent for almost any land. In the process of leaching they lose most of their *potash*, but retain other valuable fertilizing properties. They are said to be of particular service to the oat crop, and on clay soils. Fifty, sixty, or a hundred bushels of leached ashes, with half a dozen bushels of plaster, and a few pounds of bone dust, make a most excellent manure for corn, mowing or pasture land. Leached ashes vary in price, according to location and demand, from three to twelve cents per bushel.

B. F. S. G., *West Newbury*.—The yellow apple sent we should call the Yellow Belle-Fleur. The sample appears imperfect, and does not answer the description of the Belle-Fleur in all particulars. The green apple is the *Green Winter Pippin*. The red (russetted) is the English Russet, and in our estimation is one of the two best apples produced in New England. It is a good bearer, producing every year, is crisp, tender and juicy, thin skinned, highly flavored, and will keep two years, if you desire it. Wherever it becomes known it is appreciated. We are preparing its history in this country, and by-and-by shall be able to tell you all about it.

A SUBSCRIBER, *Holderness, N. H.*—See remarks to "W. M. P.," above, in relation to girdled trees. Clean away all dry weeds, grass, leaves, or litter of any kind, from about the trees in the autumn, and the mice will rarely molest them. A good plan is to bank up the tree with loam, and spread it in the spring.

H. F. H., *Lawrence*.—The apples you sent are probably seedlings. Several good judges have examined them, but did not recognize any known variety among us.

G. B. W., *Middletown, R. I.*—Capital—go on with your society. The subjects introduced are important, and no doubt were ably discussed. G. B. W. thinks advertisers would sell their farms more readily if they would always affix a price.

S. T., *N. Raymond, Me.*—"Give me my paper and nought but cold water to drink, rather than all the tea and coffee in christendom and no paper." That's the true spirit. Let us hear from you, as you propose.

A communication from "W. F. B.,² Ashfield, one from "A. K.," Lunenburg, one from "F. B.," Fort Wood, N. Y., one from "J. L. L.," Hartford, and one from "I. I.," East Shelby, N. Y., are deferred to be published in their appropriate season. They would lose much of their force by being published now.

Bethel, *Vt.*—The apples sent us by a gentleman of Bethel, are undoubtedly very fine specimens of the Northern Spy.

B. F. S. G.—Please send us a sample of the Yellow Bellflower and of the Lemon Pippin, if you have them.

A. S., *Newton, N. H.*—You would scarcely get satisfactory replies to your question from our correspondents. We have had a larger supply of eggs from a cross of the native and Cochin China than from any other breed; a friend near says he gets the most from the Chittagongs—another from the Poland, and so on. It is our opinion that it does not depend so much upon the kind of fowl as upon the place they inhabit and the kind of keeping. After a plentiful supply of food, *warmth* is absolutely necessary.

R. H. H., *Burlington, Vt.*—Communications re-

ceived; will appear in good time. Your girdled trees may be saved by inserting fresh strips of bark from other trees, and excluding the air from the wounded parts.

N. C. T., *Washington, D. C.*—Thanks for your excellent article—will find a place for it soon.

E. M.—The "Rural Sketch" is evidently the work of a young hand. It contains many good ideas, and indicates a close observation of irrational life, but needs pruning both as regards correctness and length. Plain prose is far better than rhyme. We can find nothing in that way better than the Georgics.

For the New England Farmer.

GRAFTING WAX.

BY HONESTUS STEARNS.

MR. EDITOR:—I have lately read several articles recommending grafting wax prepared with *linseed oil*, &c. I have used this wax for the last two years, and that gives me some right to judge of its merits; and for the benefit of your readers and the community at large, I will venture to give a little of my experience and opinion concerning it. In the first place, in the preparation of this wax, it is evident no chemical combination takes place between the ingredients; therefore there is nothing to prevent a portion of the oil being absorbed by the bark both of the scion and stalk, which immediately puts a stop to all circulation of the juices wherever the wax comes in contact. This recipe was highly recommended by a friend, and it struck my fancy as being just the thing. I used it, and in consequence, I have lost more than a thousand scions, of choice varieties of fruit, some of them obtained at a distance at a heavy expense, besides ruining many valuable seedlings by the failure. The first year, I attributed the loss to some other cause; but after the failure the second year, I was convinced of the true cause; and on examination, I found, as a general thing, the bark of both stalk and scion completely dead. A very few set late in the season, after the circulation of the juices had become sufficient to counteract the pernicious influence of the oil, barely lived; but their stunted growth told a sad story.

The following recipe forms a perfect article; and one that is in no way injurious—though the body of a tree were completely covered with it. It is the same used by Geo. R. Gill & Son, experienced and skillful nurserymen of Springfield, Vermont, and I think the same recommended by the late Mr. Cole, in his work on fruit, viz.:

4 parts good Rosin,
2 parts Beeswax,
1 part good Beef Tallow.

Cloth may be used with the above wax, but I do not recommend it. In splicing or tongue grafting, all that is necessary is to stretch out the wax into a strip and wind it round. A little lard rubbed on will prevent its sticking to the hands. The following is recommended as a wash to cover wounds caused by pruning:

Saturate alcohol with gum shellac, and apply with a painter's brush.

Yours truly, H. S.

Felchville, March 8th, 1852.

REMARKS.—Linseed oil is recommended by many of our experienced farmers and nurserymen, as better than tallow in making grafting wax. We have used it without injury. This difference of opinion should teach the importance of close and continued observation in this as all other matters of the farm.

Ladies' Department.

SELECTION OF A CARPET.

The walls being properly papered, the next thing is to consider the pattern of the carpet. In this also the rule must be followed, of selecting small patterns for small rooms. There is economy in this, as well as taste, because small-patterned carpets are generally found the most durable. As a rule, a formal geometrical pattern is best for a carpet; it should be something which does not appear unnatural to tread upon. It is a mistake to put flowers, trees, or figures of birds or animals, into a carpet, for we do not walk on such things; far other are their purposes and uses. Sometimes a carpet is made to represent a picture or landscape, which is also a mistake, for it offends our notions of propriety to see such objects spread on a floor. In the formal pattern, all these defects are avoided; it is not unusual to walk upon ornamental pavements or floors, and we are not displeased at seeing varieties of similar ornaments reproduced in a carpet. Those persons who have seen the House of Lords will remember that the pattern of the carpet is nothing more than a small amber-colored star, on a deep blue ground, which, simple as it appears, harmonizes admirably with the superb decorations of the spacious edifice.

Another reason why a small pattern should be chosen is, that it suits best with the furniture of a room. The furniture must of course cover some portions of the carpet, so that if the pattern be large, there is so much confusion between what is seen and what is hidden, that a very disagreeable effect is produced. With a small pattern, on the contrary, the concealing of a portion by the furniture does not spoil the effect of that which remains uncovered. In general suitability the Turkey carpet is the best; it is adapted for almost any style of furniture, and no one ever gets tired of it, owing to the perfect naturalness and harmony of the pattern. Let it be remembered, that neither on the wall nor on the floor should there be any one strong predominating color which injures the effect of everything else in the room. As a rule, the color of the carpet should be darker than that of the walls; very light patterns are most suitable for bedrooms.

WOMAN'S RIGHTS.

David Hale, late editor of the *Journal of Commerce*, once wrote a *jeu d'esprit* on the "Rights of Women," in which he showed that the balance of wrongs was decidedly on the side of the men. "When the simple question of superiority is at issue, the men always have to give up. If ladies and gentlemen meet on the sidewalk, who has to turn out? If there are not seats enough for all the company, who has to stand up? When there is danger to face, who must go forward? If there is curiosity to gratify, who goes behind? If there

is too much company for the first table, who eats at the second? Who has always the right hand and the most respectable position?" We could mention a hundred other cases in which, on the simple question of right, everything is yielded to the women.

But there are many cases in which the condition of men is still worse. For instance, if on any public occasion a pew at a church, or a seat anywhere, be occupied by men ever so respectable or aged, a smirky little beauty trips along and presents herself at the top of the seat, and they must all jump up and clear out as if they had been shot. Especially ought it to be noticed, that when matrimonial negotiations are to be made, the whole burden of performing the delicate and often very embarrassing part of making proposals is thrown upon the men, while the women sit and say no, no, no, as long as they like, and never say yes, until they have a mind to.

DOMESTIC RECEIPTS.

INDIAN BAKED PUDDING.—One pint of Indian meal, one-heaping table spoonful of wheat flour, a table spoonful of butter, four eggs, salt just to taste, milk enough to form a batter. Stand your butter near the fire to warm, add it to the Indian meal, then the salt and milk. Beat the eggs very light, the yolks and white separate; add the yolks to the Indian batter, then the whites alternately with the flour. Do not beat it after the whites are in. Butter a pan, pour in the batter, and bake it in a moderate oven. This pudding is very good with a quarter of a pound of currants and a quarter of a pound of raisins, floured and stirred into the batter. To be served with sweet sauce of any kind.

OXFORD PUDDING.—Half a pint of bread crumbs, one pint of milk, six eggs, two ounces of butter, half a pint of cream, a quarter of a pound of dried currants, sugar and nutmeg to the taste. After the bread is soaked in the milk, which should be warm, mash it very smooth and add the butter while it is hot. Beat the eggs very light, the yolks first, and stir them into the bread and milk, then add the cream, sugar, nutmeg and fruit. Lastly have the whites whisked to a dry froth; stir them gently into the mixture; butter your cups, half fill them with the batter, and bake them in a tolerably hot oven. Serve with pudding sauce.—*National Cook Book.*

YEAST.—The bitterness of yeast, which is often a cause of complaint, may be removed by straining it through bran, or by dipping red hot charcoal in it. But the most effectual and easily available remedy is to put the yeast into a large pan, and cover it with spring or well water, changing it every three or four hours. The bran seems to impair the strength, and the coal sometimes stains it, but the water purifies it in color and taste.

The mode of using water for keeping and purifying yeast has been adopted by some of the American housekeepers with entire success. So says the *Gardener's Chronicle*.

HANNAH MORE'S PUDDING.—Six ounces of apples, chopped fine; six ounces of beef suet, chopped fine; six ounces of bread, grated; six ounces of

currants; six ounces of raisins, stoned and chopped; six ounces of sugar; six eggs, well beaten; three ounces of candied peel, chopped; half a nutmeg, grated; and a glass of brandy. These ingredients to be well mixed, and boiled in a well buttered quart mould for three hours. This pudding should be mixed the day before it is cooked. It is a rich pudding for company, and not expensive.

Boy's Department.

THE BAG OF DAYS.

Suppose you had a bag of marbles on your shoulder to carry, and yet if every boy you met, made you give him a marble, your bag would soon be empty.

We are all sent into this world by God, with a bag, not of marbles but of days. Sometimes death stops the little child before it has gone far with its bag of days, and its life in this world is closed. But perhaps you may live for many years; yet do not forget that Time is always after you, taking now a day and again a day, and he will soon empty the largest bag of days.

If the bag were one of marbles instead of days, people would feel the bag lighter, and inquire who had taken them; but many do not think that their bag of days is always getting lighter, and too many find it nearly empty before they scarcely think about it.

O, we should never forget that every night we lay down to sleep, Time has taken another day out of our bag. We have no time to lose, we cannot afford to trifle, and therefore while life is before us, we must learn to improve what is good and useful, to be pure and holy, so that if we live to be old, we may look on the days that are left in our bag without a sigh, nor regret the days lost or idly spent.

That is a good prayer in the Bible, "Lord, teach us so to number our days, that we may apply our hearts unto wisdom." Let us often think of our bag of days, and examine it, to reckon up how many time has taken away, and how many are left. Let us use every one for the best purpose, and pray this good prayer to our Father that we may not slight or abuse them.

POLITENESS AT HOME.—Always speak with the utmost politeness and deference to your parents and friends. Some children are polite and civil everywhere else but at home, but there they are coarse and rude enough. Shameful!

Nothing sits so gracefully upon children, and nothing makes them so lovely, as habitual respect and dutiful deportment towards their parents and superiors. It makes the plainest face beautiful, and gives to every common action a nameless but peculiar charm.

"My son, hear the instruction of thy father and forsake not the law of thy mother, for they shall be an ornament of grace unto thy head, and chains about thy neck."

APPOINTMENT AND DISAPPOINTMENT.—Gen. Taylor, on one occasion, being besieged by office-seekers, made the smart remark, that "some were doomed to appointment, and some to disappointment."

Mechanics' Department, Arts, &c.**TO CUT AND GRIND GLASS.**

The art of cutting glass is much more modern than that of painting and staining it. At present the richness and brilliancy of our vessels of glass, which contribute so much to the ornament of our tables and saloons, are owing, in a great degree, to the elaborate manner in which they are cut. The cutting is effected by wheels driven by considerable power, the glass being held to the wheels. The first cutting is with wheels of stone, then with iron wheels covered with sharp sand or emery; it is then polished in the same manner by putty, or oxide of tin. To prevent too much heat being excited by the friction, a small stream of water is constantly running on the glass. In large manufacturing the wheels are urged by a steam engine. Glass may be ground by hand on any coarse-grained sand-stone, or with sand, or with emery and water. Panes, or flat pieces of glass, may be divided, when a glazier's diamond is not at hand, by making a notch with a file and carrying a piece of hot charcoal in the line in which it is wished the fracture should proceed. The charcoal must be kept alive with the breath. A red hot iron will also do. The art of casting in glass has lately arrived at such perfection that many articles, such as small plates, salt-cellars, &c., now almost rival, at first sight, those that are cut; and glass casting has one advantage over glass cutting, that certain ornaments can be cast that could not be cut with the wheel; but no casting has yet quite equalled the sharpness and beauty of cut glass, and indeed cannot bear close comparison with it.—*Encyclopædia of Domestic Economy.*

MODE OF PRESERVING SHINGLES ON ROOFS.

A gentleman in Groton gave us the other day the manner in which he prepared his shingles, before laying them on his house, some six years ago; and on examination, we found they had a perfectly sound and fresh appearance, as though they had been laid not more than a month.

He had a large boiler, which he filled with whitewash, mixing with it, about one pound of potash to four gallons of liquid, also about the same amount of salt. This composition he boiled, and while it was boiling, he dipped the shingles in, taking a handful at a time, and holding them by the tips. He had boards placed so that he could set his shingles on them on end, and let the liquid, as it ran off them, run back again into the boiler. The shingles he allowed to dry in this position, before laying them, and his belief was, that by thus curing or hardening them, they would last much longer. They could be colored red or yellow, easily, by mixing red or yellow ochre with the composition.

The expense for shingles on a roof, is very considerable, as the most of those which we buy now, unless we go to a very high price, in purchasing, last but for a few years, and therefore something that will harden and preserve them like the above, and which costs but little in the application, will be thankfully received by owners of buildings.—*Spindle City.*

Farm for Sale in Concord, Mass.,

Situated half a mile from the village, on the road to Lowell, containing about seventy-five acres of good land, well divided into Mowing, Tillage, Pasturing and Woodland, and having thereon an excellent Orchard and Cranberry Meadow. Said farm is well enclosed with good walls, and is considered one of the pleasantest situations in the county of Middlesex. Connected with the farm, and lying about one and a half miles therefrom, is a good Pasture, containing about sixty acres, which will be sold with it, if desired. For further particulars inquire of SIMON BROWN, Esq., editor of New England Farmer, or JOHN B. MOORE. Concord, Mass., Feb. 28. t^h

Fruit Trees—Fruit Stocks.

The subscriber offers for sale at the nursery of the late S. W. COLE, in Chelsea, a general assortment of Apple, Pear, Plum, Cherry and Peach trees, among which are many new and superior varieties, such as choice kinds of Apples, Kirkland's new Cherries, McLaughlin and other Plums, and hardy seedling Peaches of northern origin. Also, Grape-vines, Quinces, Currants, Gooseberries, Raspberries, Thimbleberries and Cranberries. Among the Grapes are the famous Diana. Among the Gooseberries are Houghton's Seedling, the most valuable of all varieties, being hardy against the blight, and a great grower and bearer. 12,000 Cherry Stocks, from one to three years old. 10,000 Apple Stocks, from one to four years old. Also, Pear, Plum and Quince Stocks, in smaller quantities. All orders thankfully received, and promptly executed, under the superintendence of an experienced nurseryman. MARTHA S. COLE. Ruggles, Nourse, Mason & Co., Agents, Quincy Hall, Boston. t^h March 6.

Fruit Trees.

The proprietors offer for sale a large and fine stock of Fruit, and Ornamental Trees, Shrubs, Buckthorn Plants &c. Pear, Apple, Peach, Cherry and Plum Trees of choice standard varieties. Also Quinces, Gooseberries, Currants, Raspberries, Strawberries, Grape Vines, &c. Extra sized Hamburgs for the Conservatory or Grapery. A fine lot of Cherry and Apple Trees, two to four years from bud. The whole for sale at reduced prices. D. & G. F. STONE, Hammond Street, East Newton. w161—417 Jan. 10, 1852.

Balsam Firs, Arbor Vitæ, and other Forest Trees.

HENRY LITTLE & CO., of Bangor, Maine, will furnish any number of Evergreen and other Forest Trees, taken up with earth on the roots, with the greatest care, and sent to any part of the United States by Steamers or Railroad—and carefully packed in large boxes, at short notice, at the following prices, viz: From 6 inches to 1 foot, at 1 cent, or \$10.00 per 1000. From 1 foot to 2 feet, at 1½ cents, or \$15.00 per 1000. The above prices refer more particularly to Balsam Fir and Arbor Vitæ Trees. We charge what the boxes cost, but nothing for packing. For two years past, the trees we have procured and sent to a distance, have lived generally, and have given good satisfaction. Evergreens will not live unless taken up with great care. Bangor, April 17, 1852. 4w*1

Bound Volumes.

BACK VOLUMES of the NEW ENGLAND FARMER, elegantly bound in Muslin, Gilt and Embossed, are now for sale at this office. Boston, March 20, 1852. t^h

Seed Potatoes.

CHOICE Early and Late sorts can be procured at our Seed Store. We invite particular attention to the "Eastern Early Blue," for very early, and the "Danvers Seedling" for late crops; of the latter sort 882 bushels were grown from 28 bushels of seed, the past summer. RUGGLES, NOURSE, MASON & CO., Over Quincy Market. Boston, March 27.

The Farmers' Library.

JUST RECEIVED, the following assortment of Agricultural and Horticultural Books, embracing the standard works of eminent American and European writers, on the Farm, the Orchard, the Garden, &c. &c.

	PRICE.
American Farm Book, by Allen,	\$1.00
Farmer's Treasure, by Faulkner and Smith,	.75
Dana's Muck Manual,	1.00
Prize Essay on Manures, by Dana,	.35
American Muck Book, by Browne,	1.00
Lectures on Practical Agriculture, by Johnstone,	.75
Elements of Scientific Agriculture, by Norton,	.50
Principles of Agriculture, by Thos.	2.50
Practical Agriculture, by Johnstone,	.75
Agriculture for Schools, by Blake,	1.00
Catechism of Agriculture and Chemistry, by Johnstone and Norton,	.25
American Agriculturist, by Allen,	1.00
Liebig's Complete Work on Chemistry,	1.00
Farmer's and Emigrant's Hand Book, by Marshall,	.75
Home for all, by Fowler,	.50
Book of the Farm, by Stephens and Skinner,	4.00
Cottage and Farm Houses, by Downing,	2.00
Downing's Country Houses,	4.00
Rural Architecture, by Allen,	1.25
Downing's Landscape Gardening and Rural Architecture,	2.50
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Fruit Garden, by Barry,	1.25
Complete Gardener and Farmer, by Fessenden,	1.25
Bridgeman's Gardener's Assistant,	2.00
Bridgeman's Kitchen Gardener's Instructor,	.60
American Fruit Culturist, by Thomas,	1.00
Gardener and Complete Florist,	.25
Florist's Guide, by Bridgeman,	.50
New England Fruit Book, by Ives,	.66
Yonatt and Martin on Cattle, by Stevens,	1.25
Rose Culturist,	.38
Johnson's Gardener's Dictionary, by Landreth,	1.50
Rural Economy, by Bonsingault,	1.00
American Rose Culturist,	.25
Bigelow's Plants of Boston,	1.25
Genera of Plants of the U. S., by Gray, 2 vols.	12.00
Gray's Botany,	2.00
Farnell's Chemistry,	1.00
New England Farmer, by Cole,	1.00
Ladies' Guide and Skillful Housewife, by Mrs. Abel,	.25
Hive and Honey Bee, by Richardson,	.25
Bee Keeper's Manual, by Miner,	.50
Bird Fancier, by Browne, paper 25 cents,	.60
Townley on Bees,	.50
American Poultry Yard, by Browne,	1.00
American Poultryers' Companion, by Bement,	1.00
American Fowl Breeder, by Moore,	.25
American Herd Book, by Allen,	2.00
American Shepherd, by Morrill,	1.00
Domestic Animals, by Allen,	.75
Diseases of Animals, by Cole,	.50
Hints to Sportsmen, by Lewis,	1.25
Dodd's Anatomy and Physiology of the Horse,	1.00
Mason's Farrier and Stud Book, by Skinner,	1.25
Management of Sheep, by Canfield,	1.00
Yowatt on the Pig,	.60
Knowlson's Complete Cow Doctor,	.25
Horse Doctor,	.25
Guenon's Treatise on Milch Cows,	.38
Treatise on Hot Houses, by Leuchars,	1.00
Allen on the Grape,	1.00
Loudon's Encyclopaedia,	10.00
Schenck's Text Book,	.50
Brock's Book of Flowers,	.75
Downing's Fruit and Fruit Trees,	1.50
For sale at the Publishers' prices by RUGGLES, NOURSE,	
MASON & CO., Quincy Hall, (over the Market,) Boston.	
April 3, 1852.	11*

Grass and Clover Seeds.

1500	BUSHELS HERDS GRASS —(fine, superior as extra.)
1000	bushels Pennsylvania Red Top—(extra.)
1000	do. do. do. (fine.)
500	do. Northern Red Top.
6000	pounds Northern Red Clover.
12,000	do. Western do.
4000	do. White Honey-suckle Clover.
200	do. Lucerne or French Clover.
100	bushels Orchard Grass.
100	do. Kentucky Blue Grass.
100	do. Fowl Meadow Grass.

And numerous other sorts, such as Sweet Vernal Grass, Rhode Island Bent, Lawn Grass, &c. &c., for sale in quantities to suit purchasers, by **RUGGLES, NOURSE, MASON & CO.,** March 20, 1852. 11* Over Quincy Market, Boston.

Garden Seeds.

WE respectfully solicit the attention of purchasers of **GARDEN SEEDS** to our extensive stock, which we offer for sale. We have all the sorts of Vegetable Seeds that have proved worthy of cultivation; also, Grain, Grass and Flower Seeds. All the varieties are raised and selected expressly for our trade, and we do with confidence recommend them to all who desire to procure seeds that will prove true to their names. **Our Catalogues gratis, on application.**

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For the Cure of

COUGHS, COLDS, HOARSENESS, BRONCHITIS, WHOOPING-COUGH. CROUP, ASTHMA, AND CONSUMPTION.

THIS invaluable remedy for all diseases of the Throat and Lungs has attained a celebrity, from its remarkable cures, never equalled by any other medicine before. Other preparations have shown themselves palliatives, and sometimes effected notable cures, but none has ever so fully won the confidence of every community where it is known. After years of trial in every climate, the results have indisputably shown it to possess a mastery over this dangerous class of diseases which could not fail to attract the attention of physicians, patients and the public generally.

See the statements, not of obscure individuals, and from far distant places, but of men who are known and respected throughout the country.

The widely-celebrated surgeon, **Dr. VALENTINE MOTT**, of New York city, says:—"It gives me pleasure to certify the value and efficacy of *'Ayer's Cherry Pectoral'*, which I consider peculiarly adapted to cure diseases of the throat and lungs."

Dr. PERKINS, the venerable President of the Vermont Medical College, one of the eminently learned physicians of this country, writes, the *Cherry Pectoral* is extensively used in this section, where it has shown unmistakable evidence of its happy effects upon pulmonary diseases.

Rev. JNO. D. COCHRANE, a distinguished clergyman of the English Church, writes to the proprietor from Montreal that "he has been cured of a severe asthmatic affection, by *Cherry Pectoral*." His letter, at full length, may be found in our Circular, to be had of the Agent, and is worth the attention of asthmatic patients.

This letter is from the well-known Druggist at Hillsdale, Michigan, one of the largest dealers in the State; and this case is from his own observation:

HILLSDALE, MICH., Dec. 10, 1849.

Dear Sir:—Immediately on receipt of your *Cherry Pectoral* I carried a bottle to an acquaintance of mine who was thought to be near his end with quick consumption. He was then unable to rise from his bed, and was extremely feeble. His friends believed he must soon die, unless relief could be obtained for him, and I induced them to give him your excellent medicine a trial. I immediately left town for three weeks, and you may judge of my surprise on my return, to meet him in the street on my way home from the cars, and find he had entirely recovered. Four weeks from the day he commenced taking your medicine, he was at work at his arduous trade of a black smith.

There are other cases within my knowledge, where the *Cherry Pectoral* has been singularly successful, but none so marked as this. Very truly yours,

G. W. UNDERWOOD

PREPARED AND SOLD BY **JAMES C. AYER,**

Practical Chemist, Lowell, Mass.

Feb. 14, 1852.

2m

Pure Devon Stock.

COWS, HEIFERS, BULLS and BULL-CALVES for sale. Apply at Office of **N. E. Farmer**, or to the subscriber.

B. V. FRENCH,
Dec. 27, 1851. 1yr* Braintree, Mass.

LEWIS G. MORRIS'

THIRD ANNUAL SALE, BY AUCTION, OF

Improved Breeds of Domestic Animals

WILL TAKE PLACE AT

MOUNT FORDHAM, Westchester Co., (11 miles from City Hall, New York,) on Wednesday, JUNE 9, 1852.

JAMES M. MILLER, Auctioneer.

APLICATION need not be made at private sale, as I decline in all cases, so as to make it an object for persons at a distance to attend. Sale positive to the highest bidder, without reserve.

Numbering about fifty head of Horned Stock, including a variety of ages and sex, consisting of Pure Bred Short Horns, Devons, and Ayrshires; Southdown Buck Lambs, and a very few Ewes; Suffolk and Essex Swine. Catalogues, with full Pedigrees, &c., &c., will be ready for delivery on the first of May—to be obtained from the subscriber, or at the offices of any of the principal Agricultural Journals or Stores in the Union. This sale will offer the best opportunity to obtain very fine animals I ever have given, as I shall reduce my herd lower than ever before, contemplating a trip to Europe, to be absent a year, and shall not have another sale until 1854.

It will be seen by reference to the proceedings of our State Agricultural Society that I was the most successful exhibitor of Domestic Animals, at the late State Fair.

I will also offer a new feature to American Breeders—one which works well in Europe; that is, letting the services of male animals; and will solicit propositions from such as see fit to try it. **CONDITIONS**—The animal hired, to be at the risk of the owner, unless by some positive neglect or carelessness of the hirer; the expense of transportation to and from, to be borne jointly; the term of letting, to be one year or less, as parties agree; price to be adjusted by parties—to be paid in advance, when the Bull is taken away; circumstances would vary the price; animal to be kept in accordance with instructions of owner, before taking him away.

I offer on the foregoing conditions, three celebrated Prize Bulls, "Major," a Devon, nine years old; "Lamartine," Short Horn, four years old; "Lord Eryholme," Short Horn, three years old. Pedigrees will be given in Catalogues.

At the time of my sale, (and I would not part with them before) I shall have secured two or three yearly sets of their progeny; and as I shall send out in August next a new importation of male animals, I shall not want the services of either of these next year. I would not sell them, as I wish to keep control of their propagating qualities hereafter.

I also have one imported Buck, the prize winner at Rochester last fall, imported direct from the celebrated Jonas Webb; and also five yearling Bucks, winners also, bred by me, from Bucks and Ewes imported direct from the above celebrated breeder; they will be let on the same conditions as the Bulls excepting that I will keep them until the party hiring wishes them, and they must be returned to me again on or about Christmas Day. By this plan, the party hiring gets rid of the risk and trouble of keeping a Buck the year round. All communications by mail must be prepaid, and I will prepay the answers.

Mount Fordham, March, 1852.

1w*3m

Circular.

THE subscriber takes this opportunity to return his thanks to the citizens of WALTHAM and vicinity for their liberal patronage for several years past, and solicits a continuance of the same. Orders for JOB PRINTING, of every description, promptly attended to, as usual, and returned immediately.

Address JOSIAH HASTINGS, Waltham.

N. B.—He would also give notice, that for the better accommodation of many of his customers, and the public generally in adjoining towns and at a distance, who now go to Boston by way of railroads, that he has made an arrangement with Mr. J. C. FRENCH, (formerly a workman in his office in Waltham,) at No. 11 CORNHILL, BOSTON, where orders for Book, Plain and Fancy Card and Job Printing, will be neatly and promptly executed on new Machine Presses, at the lowest prices, and returned immediately, by Express or other wise, as may best suit the convenience of customers.

Address J. C. FRENCH & CO.,
Feb. 7. 11 Cornhill, Boston.**For Sale,**

Four pleasantly situated dwellings in ELIOT STREET, JAMAICA PLAIN.

Also, two farms on WELD STREET, WEST ROXBURY—the one containing about forty acres, with house and barn; the other containing about twenty-three acres, with house, and two barns.

But a small portion of cash is wanted for any of this property. Apply to J. C. GORE, Jamaica Plain.
Feb. 21, 1852. 2m—2

Choice Seed Peas.

OUR stock of Seed Peas for the present season, is remarkably fine, and comprises all the really desirable sorts, such as

Early Prince Albert.
Early Kent.
Early Hill.
Early Washington.
Bishop's Dwarf—(grows 12 inches high.)
Eatable Potted Sugar.
Dwarf Blue Imperial.
Dwarf Marrowfat.
Missouri Dwarf Marrowfat.
Champion of England.
British Queen.
Fall Matchless Marrow.
Black Eyed Early Marrow.
Cluster—(for Field Culture,) &c. &c.

We can recommend them all, and purchasers may rely on their proving true to name. Please call and examine them at our Warehouse and Seed Store, over Quincy Market.

RUGGLES, NOURSE, MASON & CO.

Boston, March 20, 1852. 1P

State Mutual Life Assurance Co.

OF WORCESTER.

GUARANTEE CAPITAL, \$100,000.

Hon. JOHN DAVIS, President.

Hon. ISAAC DAVIS, Vice

Hon. STEPHEN SALISBURY, Presidents.

THIS Company was chartered in March, 1844, and commenced business on the first of June, 1845. Its business is conducted on the most economical principles.

The well considered and invariable policy of this Company has been to prefer the safety and mutuality of the assured to the showy advantages of a large number of policies, and an imposing amount of receipts. California risks have been uniformly declined, and the multiplication of policies in cities considered especially liable to cholera has not been encouraged.

The cash premiums of this company are calculated on the most approved tables of the probability of life, and at the lowest rates which are deemed safe.

Pamphlets, explaining the principles and advantages of life assurance, with forms of application and rates of premium, may be had by application at the Office of the Company in Worcester, or of the Agents in all the principal towns in New England.

Dec. 27, 1851.

CLARENDON HARRIS, Secretary. 1stP

Albany Drain Tile Works,

No. 60 LANCASTER STREET,—West of Medical College.

THE subscriber has now on hand, and will furnish to agriculturists, Horse Shoe and Sole Tiles of the most approved patterns, suitable for land drainage, of a superior quality, of over one foot in length. Horse Shoe Tile 23, 24 and 44 inches calibre, at \$12, \$15 and \$18 per 1000 pieces. Sole Tile 24 and 34 inches calibre, at \$12 and 18 per 1000 pieces. They are so formed as to admit water at every joint, draining land from 12 to 20 feet each side of the drain, being the cheapest and most durable article used. The great importance of thorough drainage is daily becoming more apparent.

Orders from a distance will receive prompt attention.

Albany, N. Y., April 10. 12w—6 JOHN GOTT.

Walnut Grove Nursery.

JAMES HYDE & SON.



We have for sale at our Nursery a larger assortment of trees than ever before offered by us, consisting in part of Apple, Pear, Plum, Cherry and Peach.

Also, Quinces, Currants, Raspberries, Grapevines, &c. &c.

Ornamental Trees and Shrubs, Buckthorn Plants, &c. &c. A prime lot of Red Dutch Currants, good size, \$5 per hundred, or \$40 per thousand.

Fine Apple trees, three to five years' growth from bud, seven to nine feet high, \$25 per hundred, or \$200 per thousand.

We devote ourselves solely to the raising of trees; they receive our strict personal attention; we are therefore able to warrant every article true to name.

Those who intend purchasing large quantities of Apple trees are respectfully invited to call before purchasing, and examine our stock, as it is large, and doubtless unsurpassed by any in the vicinity.

A liberal discount on all articles by the hundred.

Orders for Scions, (if sent early,) faithfully attended to.

Trees delivered in Boston free of expense, packed if desired. Catalogues sent to post-paid applicants.

All orders thankfully received, and promptly executed.

JAMES HYDE & SON.

Newton Centre, Feb. 21, 1852.

3m*

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Mexican Guano.

A NEW ARTICLE is now offered to the Agriculturist and Dealers, under the above name, from its having been found near the Mexican coast. It has been analyzed by C. T. Jackson, M. D., State Assayer, Boston, Dr. David Stewart, of Baltimore, and others. Dr. Stewart says it contains the largest proportion of Phosphates he has ever met with in Guano.

The following are the result of the analysis made by C. T. Jackson, M. D.:

Water.....	23.40
Vegetable Matter.....	15.80
Soluble Salts (in Water) Phos. Soda.....	0.12
Phosphates of Lime and Magnesia.....	60.50
Insoluble Matter (Silex).....	0.10

99.92

The quality of this Guano as a rich fertilizer, and the great reduction in price compared with the Peruvian, is such as to render it an object for the agriculturist and dealers to buy and give it a trial. It has been tried in the vicinity of Norfolk, Va., and much approved by the Farmers, those who are now buying and using of it freely. It may be obtained in lots to suit purchasers of A. D. WELD, 127 State Street, PHINEAS SPRAGUE & Co., T Wharf, or of P. A. STONE, who is the importer, and may be found at 15 Crescent Place, Boston, where also other information may be obtained respecting it. It is also for sale by Parker & White, 8 and 10 Gerrish Block, Blackstone Street, D. Prouty & Co., 19 North Market Street.

March 27.

Norway Spruce and Arbor Vitæ.



The subscribers have on hand and for sale a fine lot of Norway Spruce, four to five feet high, thrifty and well shaped.

Also, a very fine stock of Arbor Vitæ, suitable for standards or hedges. Prices reasonable.

JAMES HYDE & SON.

Newton Centre, April 24, 1852.

5w*1



GRAPE VINES.

Diana, Isabella, Catawba, Strawberry and other varieties of Grape Vines, fresh from the nursery.

FRUIT TREES.

Fruit and Ornamental Trees, and Shrubbery of all kinds, from the best nurseries in the vicinity of Boston.

SCIIONS.

Scions of all the choice kinds of Apples, Pears, Plums and Cherries, selected by experienced fruit growers.

HORTICULTURAL TOOLS.

A large assortment of Pruning and Budding Knives, Twig Cutters, Pruning Shears, Hedge do., Pruning Saws, Grafting Chisels, Strawberry and Weeding Forks, Transplanting Trowels, Sets of Ladies' Garden Tools, Shovels, Spades, Forks, Hoes in great variety, at wholesale and retail, at low prices, at RUGGLES, NOURSE, MASON & CO., (over the market.) Boston, April 24, 1852. 6w*1

NEW ENGLAND FARMER

Is published on the first of every month, by JOHN RAYNOLDS and JOS. NOURSE, at Quincy Hall, South Market St., Boston.

SIMON BROWN, Editor.

FREDERICK HOLBROOK, } Associate
HENRY F. FRENCH, } Editors.

☐ Terms, \$1.00 per annum in advance.

The FARMER, is devoted exclusively to Agriculture, Horticulture, and their kindred Arts and Sciences; making a neat volume of 576 octavo pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at the office of publication.

☐ Also published at the same office every Saturday, on a large handsome folio sheet, the

NEW ENGLAND FARMER, (WEEKLY,)

An Independent Agricultural Family Newspaper.

The News and Miscellaneous departments under the charge of WILLIAM SIMONDS, will include a full and careful report of the news of the Markets, and the news of the week, such as Domestic, Foreign and Marine Intelligence, Congressional and Legislative proceedings, Temperance and Religious Intelligence, and a general variety of Literary and Miscellaneous matter, adapted to family reading, comprising more useful and valuable reading matter than any other Agricultural Newspaper published in New England. Everything of a hurtful or even doubtful tendency will be carefully excluded from its columns.

☐ Terms \$2.00 per annum in advance.

The monthly contains nearly the same matter as the Agricultural department of the weekly.

☐ Postmasters and others, who will forward four new subscribers on the above named terms, for either publication, shall receive a fifth copy gratis for one year.

☐ All orders and letters should be addressed, *post-paid*,

RAYNOLDS & NOURSE,

QUINCY HALL, SOUTH MARKET STREET, BOSTON.

The postage on the New England Farmer, monthly, is as follows:

For any distance not exceeding 50 miles 5 cents per year.
Over 50, and not exceeding .300 miles.. 10 cents per year.
Over 300 " " 1000..... 15 " "
Over 1000 " " 2000..... 20 " "
Over 2000 " " 4000..... 25 " "
Over 4000 " " 30 " "

To prevent any misunderstanding, we quote the 16th section of the law of 3d March, 1845, which is as follows:

SEC. 16. And be it further enacted, that the term "Newspaper," herein before used, shall be, and the same is hereby defined to be, any printed publication, issued in numbers, consisting of not more than two sheets, and published at short stated intervals of not more than one month, conveying intelligence of passing events, and *bona fide extras* and supplements of such publication.

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. IV.

BOSTON, JUNE, 1852.

NO. 6.

RAYNOLDS & NOURSE, PROPRIETORS.
OFFICE....QUINCY HALL.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

FARM WORK FOR JUNE.

And after her came jolly June, arrayed
All in green leaves, as he a player were;
Yet in his time he wrought as well as played,
That by his plow-iron's mote right well appear.
BROWN.

March, April and May, the three spring months for 1852, have been with us, performed their part in the cycle of the seasons, and are gone. That part has been rather a rough and boisterous one; now thick with sweeping snows, or changing into pelting hail; stinging with intense frosts, or pouring their drenching rains. *March* came in like a lion and went out so, wearing his grim visage through the month. It snowed all day on the second, and part of the thirty-first. *April* has the character of a flirt, whereof the memory of man runneth not to the contrary, and this year it was more fickle than ever, being so lachrymose as to run nearly all to tears! Imitating her sister *March*, she invaded the realms of Old Winter and sometimes arrayed herself in unbecoming garments—white, and spotless, it is true, but cold and heartless as the mercenary lover. *May*, once rejoicing all hearts at her return, and calling scores of youths and maidens into the field to pluck her fragrant flowers, the first offerings of the floral goddess to young and pure hearts—O, *May*! how art thou fallen! It was the delight of old Cato, and Virgil, and Columella, as well as of many of our nearer neighbors, to sing of thy charms, and praise thy rare delights in their immortal verse. But, alas! thou hast become as fickle as *April*, and we are prone to seek thy former beauty in thine other sister that follows in thy train. But thou art not all coldness and cloud; thy gentle nature gains the ascendant, as the month grows old, bringing the reluctant bud and blossom, with green fields and our cheerful friends, the birds, again. Welcome,

"Sweet day, so cool, so calm, so bright,
Bridal of the earth and sky."

Harbinger of lovely *June*! Welcome, with thy carpets of green, spicy gales, songs of birds, and low of kine.

PLANTING being over, there will be a little respite, a brief breathing place to look into all the affairs of the farm more leisurely, and attend to the smaller, but not minor, matters which the haste to get in the seeds has prevented. And first, let him who has had the forecast to plant a tree either this season or before, extend his care to it and extirpate its enemies,

THE BORERS.—They will make sad havoc with your fair orchard unless your own eye, and knife, and wire and hand are active. Now is the time to dislodge them; by scraping the earth carefully away from the base of the tree and closely examining it, the spoiler may be discovered either by his hole, his castings, which resemble saw-dust, or by some peculiar appearance of the tree. By inserting a small wire with the smallest possible hook upon its end, they may generally be drawn out; but if not brought to light the wire will kill them.

THISTLES, mulleins, dockroots, burdocks, and all such rank herbage, will constantly spring up, especially about the buildings, unless the farmer is in the habit of destroying them. By neglect they sometimes cover large patches of excellent ground and render it worthless, beside disfiguring the premises and scattering their seeds over the farm. An hour or two at the right season will arrest them and save crop and character. The cure is to cut them off just below the surface and drop a handful of salt upon the bleeding wound; or sink the spade and start their roots and pull them up bodily. These, and the ox-eye daisy, or white weed, which is becoming so prevalent all over New England, should be weeded out of the grain and grass fields upon their first appearance.

HOES.—No implement on the farm is in more demand than the *Hoe* in the month of June. Get a good one and keep it smooth and bright. Let it be of the right weight, remembering that he "who makes with a common hoe, two thousand strokes an hour, should not wield a needless

ounce. If any part is heavier than necessary, even to the amount of half an ounce only, he must repeatedly and continually lift the half ounce, so that the whole strength thus spent would be equal, in a day, to twelve hundred and fifty pounds, which ought to be exerted in stirring the soil and destroying the weeds." It is important, also, to see that the hoe stands just right, neither out nor in too much, but in that position which will enable the person to stand in an easy attitude while using it. Hoeing is of the utmost importance in farm husbandry. It keeps the ground in fine tilth, which is its proper condition to receive light and heat, and the important atmospheric influences.

WEEDS.—These are merely grasses out of place. They get a great many kicks, cuts, and perhaps curses, from the indolent and thoughtless,—but they are really "blessings in disguise." How many fields and gardens would feel the plow and hoe, if no weeds appeared! and would present a hard, impervious crust, resisting all efforts of the genial sun or cooling dews to enter and feed the starving roots. But the weeds spring up as faithful monitors to prompt us to duty! calling us from field to garden, as each demands attention. Look no longer, then, upon the weeds as pests and plagues, but by careful industry exclude them from the crops which you prefer to them.

WATERING.—Water copiously and rarely; a constant drizzling cakes the ground, and is of little service to the roots.

THE GARDEN.—Pass through the garden once a day, at least; give it an hour in the morning and another in the evening, if possible; no part of the farm will pay you better than the garden crops. Coop some of the hens near and allow the chickens to go at will over the garden; and they will be able to obtain what meat they require with their vegetable diet.

Sow melons and cucumbers towards the last of the month for pickling.

GRASS.—In rich, moist spots, grass will grow rank, and sometimes lodge before the end of June. This should be cut early, and another crop may be taken from the same ground.

CATTLE.—The stock still needs the master's eye. A little extra attention keeps the animals healthy and thrifty, and that is the only possible condition in which a profit can be derived from them.

MANY THINGS.—The merchant watches the daily fluctuation of prices in his business, and calculates the loss and gain on them with eagle eye. So should the farmer watch every minute innovation, whether by insect or weed, upon his crops, and carefully attend to each at the particular season when they demand it. Promptness, as well as neatness and order, should prevail in every department of the farm.

It seems to us that JUNE answers the descrip-

tions of MAY, by the old writers. It is full of life and beauty, and invitations to the country.

In this fair month, when all things bloom,
Come to the green mead, come away!
Where joyous ply the morning larks,
And bob-o-links their minstrelsy.

IS IT NOT SO?

Agriculture must always be the main business of the country; but, singularly enough, it is almost the only business that is not ruinously overdone. Men rush into everything else with headlong avidity, or loiter around cities by thousands for chance employment, while broad fields are waiting for the husbandman, on every side, proclaiming that "the harvest is great, but the laborers are few." We think the *New York Express* hits the nail on the head, in the following paragraph:—

"The high prices of beef, veal, mutton, butter, potatoes, and other such necessities of life, not only in this great metropolis, but in other cities on the Atlantic, indicates something wrong in the mode of providing for the markets, or the forwarding of things to market. Be the causes of high prices, however, what they may, if the cause be good, *more farmers are needed than we have.* Agriculture, prices tell us, is underdone, and other things are overdone. *There are not enough raisers of food properly to supply the devourers.*"

BARN.—The drawing of the barn in this number of the *Farmer* was furnished us by Mr. J. H. HAMMOND, of Grafton, Mass., who offers his professional services to farmers, and others who are about erecting or altering their buildings, in an advertisement in another part of the paper. We believe his views will be the means of making a material change in the construction of barns, particularly, and take pleasure in calling attention to them. His address is Grafton, Mass., and we recommend him as a gentleman thoroughly understanding the wants of the farmer in the matter of farm buildings.

A GLASS TOWER.—It is proposed in London to convert the Crystal Palace into a glass tower, 1000 feet in height, and a plan and drawing of the new idea is given in the *London Builder* of the 1st of May. It looks beautifully poetic on paper, but whether a structure of the proposed height can be made self-sustaining, there is some doubt; at any rate, we should prefer a residence a little over 1000 feet from its base, had we a choice, or should we ever be compelled to live in a garret in the great metropolis.—*Transcript.*

CARE FOR OTHERS.—A poor old man, busy planting an apple-tree, was rudely asked, "What do you plant trees for; you cannot expect to eat the fruit of them?" He raised himself up, and leaning upon his spade, answered, "Some one planted trees for me before I was born, and I have eaten the fruit. I now plant for others, to show my gratitude, when I am dead and gone." Thus should we think and act for the welfare of others.—*Exchange.*

For the New England Farmer.

DEEP PLOWING ACCOMPANYING HIGH MANURING,

AN ANTIDOTE TO NEW ENGLAND STERILITY.

BY F. HOLBROOK.

I have through the agricultural journals so often and earnestly expressed my views upon the subject of deep plowing, that those who have taken the trouble to read what I have written may consider the following remarks an unnecessary repetition. But the application of "line upon line, and precept upon precept," is important in more connections than one; and besides, the *New England Farmer* is doing its share with the other journals in making inroads upon that large class who have opposed all innovations upon traditional customs of husbandry; and by inducing the accessions from that class to read and reflect a little now and then, it is expected that a gradual triumph over their prejudices will be attained, that they will reason correctly upon the alterations in the course of farming which present circumstances demand, and make such changes and improvements as reason suggests. I hope to persuade now and then a reader who has heretofore practiced shallow plowing, to put his plow a little deeper into the ground, this very spring. That a shallow soil may gradually be made a deep one, with profit to the owner, is a proposition, both theoretically and practically considered, in the truth of which I fully believe; and to do and say whatever I can to convince others of its truth, and persuade them to practice accordingly, is my settled and resolute determination.

New England soils are generally by nature too shallow; and what is worse, they have in many instances been subjected to a process of exhaustion which they never were by nature or the art of man, at all fitted to endure. Too much of our tillage land has been plowed but four or five inches deep, scantily manured, and severely cropped; and thousands of acres of plain and pasture lands have been skimmed by the plow and taxed with a succession of grain crops, without manure, until they can not give up anything further of value to the owner. The cry has been, "give, give;" and if the soil has from time to time reminded the owner that he was robbing it of the ability to answer his greedy call, he has sheltered himself under the plea of inability to return an equivalent for its generosity. If the Agricultural journals and others have hinted that he should plow deep, manure generously, and crop less severely, the reply has been that such doctrines may do for book-farmers and men of fortune, but the *practical* farmer has no interest in them: he must get what he can from the ground, with the least possible particularity of tillage; and as for deep plowing, it is easier to plow shallow; and as for high manuring, it cannot be afforded: he has not the funds to buy manure, and it is too much trouble and expense to manufacture it.

But the skinning mode of farming has had a fair and faithful trial in New England, and we have now full proof that it will not do. The original projectors of the system made perhaps pretty fair profits by it, but their successors cannot profitably prosecute the depleting process. Men now-a-days must either make up their minds to adopt a system of farming improving to the land, or else sell out and go at some other business, or go West, where

a virgin soil will permit an application of the old system for a generation or so. If we further attempt to force the old system upon the land here in New England, poverty or the auctioneer's hammer will ultimately command us to leave off.

It is encouraging to observe that new and better principles of cultivation are gradually gaining ascendancy. Our enterprising farmers, those who read, observe and reflect for themselves, are awake to improvements; a large class are yearly going to farming from other pursuits, with minds free from prejudice, bringing to their new business a laudable enthusiasm, and enterprising, liberalized views; the leaven thus infused is exerting a marked and useful influence; and New England farming is certainly improving.

In a former communication, I dwelt upon the importance of an industrious manufacture of compost-manure, and a liberal application of the manure to the land; and remarked that thus we may cause now desert places to blossom again, and make the cultivation of New England soil a remunerating business. It is my present purpose to speak of deep plowing, as a fit companion of high manuring.

Generally speaking, the farmers of New England may advantageously deepen their plowing at least an inch at each breaking up of the fields from grass, or during each rotation of crops, provided the process is accompanied by a liberal dressing of manure. In some cases the deepening process may be twice as rapid, and I shall presently instance a case. In proportion as the surface soil is properly deepened, so will the roots of the crops have more extensive pasture, and greater protection from the scorching influence of drought. When soils naturally inclined to pack are invariably plowed in shallow furrows, a hard crust or *pan* is formed at the bottom of the furrow, by the action of the feet of the cattle and the sole of the plow, through which the little rootlets cannot penetrate; and this barrier being near the surface, the roots suffer for moisture in a time of drought, and the crop is thereby lessened. In proportion as land is deeply plowed, so is there a greater amount of loose earth on the upper side of the inverted furrows, out of which the harrow can make a deep fine mellow tilth, so that the planting and after cultivation of the crop is made easy and cheap, and the young plants can strike out their roots freely in every direction, and come forward rapidly in the fore part of the season. Compost-manure, especially if it is made of two parts muck, is very favorable to the productiveness of crops, when kept near the surface; and in proportion as the plowing is deep, so can the manure be intimately blended with the earth, and its volatile properties preserved. Proper deepening of the soil is favorable to a succession of good grass crops, because the land does not soon become "bound out," the roots having a good range, and not becoming so soon entangled in a thickly matted web, as they do where the soil and plowing are shallow. When grass land is broken up in deep furrows, there will be a sufficiency of loose mellow earth above the inverted sod for all the purposes of planting, and afterwards of seeding with grain and grass seeds, without bringing the turf again to the surface. The decaying sod, lying at the bottom of the furrow, through the whole rotation, is a soft yielding, spongy bed to keep the land up light,

a rich mass of decaying vegetable matter furnishing nourishment to the little rootlets, which penetrate it in all directions, and a reservoir to retain moisture through a considerable period of drought. What was before plowing the poor lower stratum thus remains on the surface through the whole rotation, is altered and improved by the action of the atmosphere, and enriched by contributions from the atmosphere, and by the manure; the grasses form a rich sward in it, which in due time is turned under to decay in it and fill it with vegetable substance, and thus a formerly poor and inactive substratum becomes as active and good a portion of the soil as any.

The statements made in the foregoing paragraph are well illustrated in my own practice. Sixteen years ago, I determined to commence the deepening of my surface soil. A description of my course of management with a field of five acres, now in corn-stubble and to be seeded to grass the present spring, will afford an example of my practice generally in deepening the active soil. The field is a sandy loam, portions of which are quickly susceptible to the influence of drought. Previous to the time when I commenced deeper plowing, the land had never been turned up more than four to five inches deep; but it had been well farmed, and was in good heart to that depth. In the month of November, it was broken up from grass to the depth of seven inches, the furrows remaining through the winter as laid by the plow, exposed to the action of the elements. In May, thirty loads, or fifteen cords, of a compost made of two parts muck to one of animal manure, were spread on each acre, and the harrow was passed back and forth, lengthwise and crosswise the furrows, until the dressing was intimately mingled with the earth to the depth of three or four inches. The field was then planted with corn, and the crop was early matured and exceeded sixty bushels to the acre. The next spring the surface was made perfectly level and mellow with the harrow, without disturbing the decaying turf underneath, and grass seeds were liberally sown with oats. The crop of oats was highly satisfactory in amount and quality, and the grass crops made better than two tons of hay to the acre per year, as long as the land lay in grass. The field was again broken up from sod, from eight to nine inches deep, in the month of November, the land was manured as before, planted, and seeded to grass as before, leaving the decaying sod undisturbed. The crops were all excellent. A year ago last November, the field was again plowed up from grass, in furrows ten inches deep. Last spring it was manured with fifteen cords of compost per acre, and planted with corn. The crop was very heavy, and of fine quality, notwithstanding the season was not one of the best for the corn crop. The present spring, the field will be plowed about five inches deep, in furrows nine to ten inches wide, sown with spring grain, and stocked to grass with one bushel of red top, eight pounds of white clover and six pounds of southern red clover seeds to each acre. I expect to see a fine carpet of grass covering the field, and hereafter to gather from two to three tons per acre, each of four years, of as milk producing hay as any body else will have. This field now presents a uniformly rich soil to the depth of ten inches. I really believe that commencing with last year's crop it will for five or six years compare

favorably in product and profit with almost any other field of equal size, excepting perhaps the river-bottoms of the West.

I have other fields, not naturally of as good soil as the one above described, upon which the deepening process has necessarily been more gradual, about an inch at each rotation, and which have not yet been plowed over eight inches deep. But any of my land, however barren and thin, is very decidedly improved in productive quality, by deeper and deeper plowing, accompanied with liberal manuring.

I have to say to the young farmer, in debt for a poor old exhausted farm—do not suffer yourself to be fettered by old customs, but think for yourselves; and let reason rather than tradition superintend and direct your operations. Innovate at once upon the old skinning system of farming. Manufacture manure, apply it liberally, and deepen your plowing as fast as you can, judiciously. Your lands will grow more and more productive under such treatment, and furnish you the means of getting out of debt; in a few years you will have a farm pleasant and profitable for cultivation; and as you grow older, and have less ability to labor hard for bread, your farm will produce it for you with less labor than is now necessary, and give you the means for improving yourself and your family.

F. H.

Brattleboro', April 20, 1852.

FARMER'S GUIDE—GRASSES.

In looking over the pages of this excellent work, we notice in that portion devoted to the discussion of spring employments, that particular attention is paid to the subject of grasses. This prompts us to suggest to those sowing grass seeds, the importance of mixing such grasses as will come into bloom at about the same time. Some grasses come to perfection sooner than others, and when growing with a later kind, the former loses its leaves, the nutrient portions of the stem go to perfect the seed, and the grass itself is nearly worthless to cut as fodder. This loss may be prevented in part by a proper intermingling of seeds.

In speaking more at length of the *Farmer's Guide* some weeks since, we stated that there were eight beautiful engravings on steel. Whether it was an error of pen or press, we do not know; but the statement should have been, as the fact is, that there are *fourteen* elegant engravings on steel. We shall have frequent occasion to refer to this full and comprehensive work.

MASSACHUSETTS AGRICULTURAL TRANSACTIONS.—We have received a copy of the above work through the polite attentions of the Hon. F. R. GOURGAS, of the Council. We shall take occasion to examine and refer to it hereafter.

AMERICAN VETERINARY JOURNAL. Boston: GEO. H. DADD, Editor.—The first article in this number, on "Bone Disorder in Cows," is worth the price of the magazine for the year.

For the New England Farmer.

OUTBURST OF SPRING.

BY HENRY F. FRENCH.

The true measure of time—The force and vigor of the farmer's character developed in the Spring—Agriculture is cheerful—"Laugh and be fat."

MY DEAR BROWN:—Somebody says that *Spring* in New England may be defined as a *leap* from Winter to Summer, and verily, the space between the sublime and the ridiculous is not shorter than the disjunctive conjunction between good sleighing and apple-blossoms in New Hampshire. Twelve days ago I saw the hills fifty miles north of us covered with deep snows, the melting of which by the sun, without rain, has since raised the Merrimack twelve inches in a single day; and now with us, the oak leaf is almost "as large as a mouse's ear," indicating that the corn-planting season is at hand.

Since the ground became pervious to spade and plowshare, I have wrought diligently both with my own personal, and my *hired* hands, setting fruit trees and a good example to my neighbors at the same time. Having added one hundred and sixty trees to my apple orchard, and an indefinite quantity of plums, cherries, peaches and ornamental trees and shrubs to the once wide waste of pine plain around my dwelling, I faithfully devote the first hour in which it is too rainy to work on the *outside* of the world, to an attempt to operate on the world within. I hope to transplant about three hundred pine trees this week, yet, and shall throw down the paper and the pen, and "take up the shovel and the hoe" at the first streak of light in the West, and therefore although I feel disposed to report myself in the columns of the *Farmer*, I have no idea of undertaking any great labor, like boring the Hoosack mountain, or our amiable readers, with a patent drill, or any other *article*, at this busy season, when a farmer's time is all occupied in working by day, and sleeping by night, through the week, and resting and *going to meeting* (I like the old Puritan phrase) on Sunday.

It is thought by the learned, that the only true measure of time we have, is by the variety and succession of our ideas; that if all the chronometers were suddenly changed so as to run twice as fast as now, and the sun and moon and stars, and all creation beside, were accelerated in the same proportion, and events and thoughts and emotions were to occur with double rapidity, we should be utterly unconscious of any change, and should, to all intents and purposes, live as long as we now do, in half the time! Distance across smooth water seems less than it is. We lie down to rest at night, and awake after hours of sound sleep, and the lapse of time is as if it had not been. Were the sleep to continue twenty years, like Rip Van Winkle's, we should be alike unconscious that a score had been added to our age, and the theory of those, who believe that the soul, after death, will rest unconscious till the final judgment of all, although it is almost as abhorrent to our feelings as annihilation, is supported by the philosophical argument, that a suspension of consciousness and of all the mental faculties may as well be for ages, as for the length of a siesta, and that time is nothing, except as it is marked by thought or sensation. When a great mathematician was shown a beautiful group of statuary, he inquired with the greatest coolness, "what does it go to

prove?" and perhaps the foregoing piece of mosaic may suggest the same question, and so I will explain its connexion with the preceding train of thought. Notwithstanding our long and dreary winters, and that we have flowers and green leaves but four or five months of the year, the memory of our childhood and the anticipations of our future are adorned with vernal beauty and fragrant with spring flowers, and although our spring is like the outburst of a passion of joy or of love, sudden and transient in its manifestation, still it is marked by a thousand vivid impressions. It is full of life, of energy and activity, of intense emotion and of definite thought wrought out into determinate manifest fact, and so the season by the *true* measure is indeed a great part of our life.

The drowning man sees the daguerreotype of his whole life pass before him in an instant. The company of his whole life acts rise up before him like the ghosts of Richard's victims in his tent on Bosworth field, pointing their dreadful fingers, and crying with one voice,

"Let me sit heavy on thy soul to-morrow."

The events of a lifetime are crowded into a moment, rendering intelligible the idea of a day when for every word and act an account shall be rendered. The farmer in New England has much of the real force and vigor of his character developed at this season. He must labor, body and mind, sustained by faith in the promise, that seed time and harvest shall not fail. He *should* labor, conscious that he is surrounded by wondrous workings of Nature's hidden laws, at every step. He *should* labor, striving ever to learn so much of those laws as science has revealed, to do his part with an earnest and manly heart, ever conscious and thankful that the hand of Omnipotence is aiding him in whatever surpasses human power. He *should* labor, not only as for his daily bread, but in sympathy with all around him, ever seeking, as he sees the bud open into a blossom, and the chrysalis become a butterfly, a *higher and truer* life. Why should he alone remain stationary when all else is advancing, while

"Every clod feels a stir of night,
An instinct within it that reaches and towers,
And grasping blindly above it for light,
Climbs to a soul in grass and flowers."

You see, my dear Brown, that I am not in the mood at this time to discourse didactically of corn and composts, potatoes and pumpkins. There are other things in agriculture, "than were ever dreamed of in the philosophy" of many, and it is of as much importance that the hearts of men should be opened to receive the lessons of God's teaching, as that the earth should be opened for the seed of the sower.

I knew a lady who had recently visited the White Mountains, and was asked if she was not very much impressed with the beauty and grandeur of the scenery. "The scenery," she replied, "I never once thought of that!" Many men see nothing in the fields and woods, but hay and firewood. To them "the bird is but a flying animal, and the flower but the covering of a clod." Well has the poet said,

"For a cap and bells our lives we pay,
Bubbles we earn with a whole soul's tasking;
'Tis Heaven alone that is given away,
'Tis only God may be had for the asking;
There is no price set on the lavish summer,
And June may be had by the poorest comer."

Everybody, in travelling, likes to see mile-stones, and I think it is well enough for you and brother Holbrook and myself to observe "in this merry month of May," that a half year has passed us by, since in the times of cattle shows and the Indian summer, we hoisted our tri-colored flag at the head of the *Farmer*.

I like your idea of giving your readers an apology for a hearty laugh occasionally and ridding agriculture of the common association with the idea of ox teams and sober faces, and everything else that is slow and dull. It has been said that the devil gets all the good music away from the church, for dancing tunes. Let us not allow him to get all the fun and spirit out of the three-quarters who till the earth, into the other quarter who worship Mammon in offices and counting-rooms.

With the eastern benediction, "May your shadow never be less," I remain your friend,
Exeter, N. H., May 12, 1852. H. F. F.

ALUMINA.

This simple earth is of great importance in agriculture. It consists of a metallic basis, united with oxygen. Clay is an admixture of alumina, silica (sand,) and oxide of iron. Next to silica, alumina is the earth most commonly found in soils, and it likewise enters largely as a constituent into most of the stony masses found on, and beneath their surface. It combines readily with carbonic acid, and forms a solid compound with it, as is illustrated in the union of lime and magnesia. It has a much greater affinity for water, than any of the other simple earths. Of this fluid, when recently precipitated, it has been found to contain six times its own weight; but when dried, by the application of moderate, but well sustained heat, it is incapable of retaining more than one and one-third times, or at most, two times its weight, without falling. When heated to redness, and even when dried at a very high temperature, it loses its power of retention, and is capable of retaining only a very diminished portion of water. Silica and alumina, which are the components of clay, are not simply mingled together in its constitution, as some of the earlier writers have supposed, but are chemically combined. In most of the clay found on or near the surface, is mixed an extra quantity of silica, known by the common appellation of *sand*. In all clay, there is a certain quantity of iron in a higher or lower state of oxidation. This oxide is formed by the union of the metal with oxygen, a union easily effected by the aid of water, or of simple moisture. It consequently varies essentially as to its characteristics and value, both as regards agricultural and mechanical purposes.

Some clay is nearly worthless when applied to soils, while other kinds are of great value. By an admixture of clay with common sand, or silex, we are enabled to form a soil of surprising and permanent richness, and it is for this purpose that clay assumes its chief importance in agriculture. If a sandy soil be overlaid with a stratum of clay, four

inches deep, and carefully plowed and worked, so as thoroughly to comminute and mix the clayey particles with about eight inches of the surface soil, the mechanical action of the application will so far modify the constitution of the soil, as to render it highly fertile. Not only will it effect the consolidation of the constituent particles, rendering the soil more firm and compressible, but also increase its capacity of retaining moisture, a property of which, in their natural and unameliorated state, such sorts are almost wholly deficient. But where soils are to be permanently improved by the admixture of clay, the most judicious, and perhaps the most economical method the operator can adopt, is to use it in compost. It will thus be more perfectly disintegrated, and prepared for mixing more intimately with the particles of the soil to which it is to be applied. When hauled upon the land and spread, it will rarely be reduced to that degree of fineness which is necessary to effect a thorough intermixture, without a much larger amount of labor than most farmers can afford, or be induced, by considerations of mere utility, to bestow.

When, however, this plan of application is adopted, it is well to haul on, and spread the clay in autumn, that it may be subjected to the disintegrating and pulverulent action of frost. In this way, the separation of the solid, or more compact masses, will be effected, and the communication of their particles greatly accelerated by the expansion of the water by freezing,—a process during which crystals or nodules of ice separate the molecules of clay, and facilitate amalgamation of them with the soil to which it is applied.

The retentive power of clay is very great. It yields up the water it has absorbed with great difficulty, and the more so, in proportion to its purity, or "fatness." It is well known that sandy soils—those composed principally of silex, and clayey soils, those composed of aluminous particles, differ from each other in two very important characteristics. Lime and alumina have a very strong affinity for organic matter and moisture, and retain both by a powerful attraction, while sand possesses no such affinity, only commingling, and never chemically combining with it, to any extent. Owing to its extreme porosity and lax texture, it opposes no resistance to the rapid and almost immediate escape of those alimentary matters which are applied as sustenance for growing crops. All the fructiferous properties of the manures applied are thus speedily abstracted by their ready combinations with the components of water, supplied by depositions from the atmosphere. But clay obviates this waste by producing a constitutional modification which renders escape impossible.

When a sandy soil has once been thoroughly ameliorated by the application of a *quantum sufficit* of good clay, it never afterwards falls back to

its normal condition of semi-fertility, but with the application of a far smaller amount of manure, continues to produce affluently all such crops as are adapted to it in its improved and modified character. The amount of clay requisite to effect a complete and radical amelioration, is a matter to be decided only by observation and experiment. Various rules have been laid down and numerous theories elaborated with a view to illustrate this important point; yet the true touch-stone is, in the case of the practical operator—**EXPERIMENT**. The old adage, "Circumstances alter cases," applies here with peculiar force, for no two fields are exactly alike, or require precisely the same treatment to render them productive.

For the New England Farmer.

DURATION OF VITALITY OF SEEDS.

BY W. J. A. B.

When I first put my hand to the plow, and began to exercise that most noble of all arts, tilling the ground, I had many instructions and monitions of wisdom from my kind neighbors, the farmers. I then found that in the country, kindness was quite as common as in the town. For I was immediately loaded down with as much as I could carry, in the shape of advice; and that in a form which was intended to leave nothing to my own indiscretion, being given as the result of experience which no one unless he were fool-hardy would disregard, and neglecting which he could reap only disaster and ruin. The benevolent counsels were bestowed as freely and with the same force of authority by the lad who on the same day had plowed his first acre, as by the sturdy yeoman who had sowed and reaped under sixty suns. One of my early lessons in the art was that I must take care to procure seed of the last harvest;—and that if I should sow that which was two years old, I should "have my labor for my gains." I soon found, however, that this was an error,—and that some other opinions and practices of the best farmers were either offsprings of the same family, and born of error,—or were only distant and collateral offsets of the tree of truth, enfeebled and diseased by contact with, or the overshadowing influence of error. Having obtained some seeds of tomatoes which I had not opportunity to commit to the earth the first season, they were placed in my trunk and there remained four years. At the end of this time, wishing to raise some of that very wholesome and agreeable vegetable, I planted my old seeds, which came up without failure of a hill, and yielded a most abundant and excellent crop.

But, gentlemen, as I have reason to think that a great many farmers are yet led astray by the old opinion which has been so current with them in relation to this matter, I desire to communicate to them, through your columns, other instances beside those in my own experience, which show the opinion to be erroneous.

Dr. Lindley, the eminent botanist and author, says, "I have now before me three raspberry plants which have been raised in the gardens of the Horticultural Society, from seeds taken from the stomach of a man whose skeleton was found 30

feet below the surface of the earth, at the bottom of a barrow which was opened near Dorchester. He had been buried with some coins of the Emperor Hadrian." It is supposed the body had lain in that place 1600 or 1700 years.

Near Stirling, in Scotland, the workmen engaged in laying bare the clay soil, underlying 14 feet of peat bog, for cultivation, threw out some clay in which the parish clergyman who was looking on espied some seeds. He took them and planted them, and they produced a species of *chrysanthemum*.

Some years ago, some well-diggers in Maine struck, at 20 feet below the surface, and a distance of 40 miles from the sea, a layer of sand, which excited curiosity, as none similar, so far as known, existed nearer than the sea-beach. It was scattered about the spot, and in a year or two the ground was overgrown with young beach plums, which had never been seen before except on the beach.

The seeds of the beach plums and *chrysanthemum* must have lain buried for ages. The duration of vitality in seeds seems to be unlimited, or nearly so, provided they are in conditions which neither call their properties into exercise nor occasion their decay. These conditions favorable to the preservation of seeds are a low temperature, dryness, and exclusion from the influence of oxygen. Seeds may be kept many years without injury, if moisture and oxygen be not entirely excluded, if the temperature be low and uniform, and the moisture slight, so as not to cause them to decay. Seeds preserved in the herbarium of Tournesfort, a French naturalist, were found to retain their fertility after the lapse of nearly a century.

These instances, except the one coming under my own knowledge, are related from the most authentic sources. I find them in a recent very valuable and reliable treatise on Vegetable Physiology, printed at Philadelphia.

There is no doubt that seeds may be placed in such circumstances as to destroy their vitality in two or three years; but my purpose is twofold;—first to show the causes of this deterioration, so that farmers and others may be enabled to preserve their seeds for more than one year;—and second, to disabuse them of the erroneous opinion which they have so long held in relation to this matter. By packing them in papers or vessels so that the air may not come to them, and placing them in a cool and dry place, they may keep them a lifetime without loss of their fertilizing property.

SALE OF IMPROVED STOCK.—The third annual sale, by auction, of Mr. MORRIS' improved breeds of domestic animals, will take place at Mount Fordham, Westchester Co., 11 miles from New York City, on *Wednesday, June 9, 1852*. The particulars of this sale are in another column, to which we refer the reader. Mr. Morris' knowledge of what good stock is, together with his character for fair and honorable dealing, render this sale unusually attractive to those wishing to purchase.

SHEEP.—We learn through the *Vermont State Journal* that S. M. JEWETT, Esq., whose communications have frequently appeared in the *Farmer*

upon the subject of sheep, has just returned from France with a new importation of one hundred and fifty ewes and fifteen bucks. The latter are fourteen months old, and weigh about 200 lbs. each; all purchased from the best flocks in France.

For the New England Farmer.

"DON'T KILL THE BIRDS."

BY A. TODD.

Notwithstanding much has been said and written in regard to the destruction of the feathered tribe, it may not be out of place to revive it occasionally in the hearing of those who are prone to destroy these harmless and musical little warblers. Did every one love birds as well as I do,—did every one delight in hearing their merry and glad-some notes, few would be the birds destroyed on the farmer's premises. But cruel as it is to take the life of the birds that build their nests and rear their young among the shrubbery around our meadows and pastures, and even under our very windows, I have myself, in days gone by, been guilty of such acts of cruelty. Gladly would I, if I could, restore to life every innocent bird I have been guilty of destroying; but it is too late.

For mere sport, multitudes of the feathered tribe are destroyed every year by the gun of the fowler. For having been guilty of such acts, I almost think I can, in part, excuse myself, from the fact that I was taught to believe that birds were great depredators. The kingbird must be killed because he caught the honey-bee; the blackbird and brown-thresher must be destroyed because they pulled up the farmer's corn, and so on, different birds doing different kinds of mischief; and for this reason little partiality was shown, and I thought the more were the birds killed, the less would the farmer's crops be destroyed. Philosophical reasonings, truly! I can call to mind many times when I have been well nigh affected to tears in witnessing the death-struggles of the little warblers that have fallen at my feet, pierced with leaden missiles.—Often have I called to mind what L'Estrange in his Fables says in regard to the observation made by the frogs to some frolicsome boys—"Children, you do not consider, that though this may be sport to you, it is death to us."

Like other boys, I was fond of sport, notwithstanding such sport resulted in the death of those creatures that had an undoubted right to live. I will mention an instance or an incident that I witnessed in my sporting days that cured me of indulging in the cruel habit. It used to be rare sport for me to "bark" squirrels from limbs of tall trees, with the single bullet, or sever their tails from their bodies and let them go free. On one occasion, as a pretty red squirrel sat eating his nuts, with his bushy tail spread over his back, I fired a bullet, and not only severed his tail, but inflicted a death-wound in the hind part of his body. Never shall I forget how my feelings were wrought upon, as the little fellow fell to the ground. With what a pitiful look did he cast his eyes towards me, and with fore paws raised for protection, seemed to say,—*What have I done?* Need I say this was the last time I ever indulged in this cruel sport?

Sporting for pleasure, and destroying the innocent creatures God has made, (and for which he

has provided ample room,) is indeed a *cruel* pleasure. To me it seems right to spare the creatures He has made, (especially the birds,) inasmuch as every thing was made for some good and wise purpose. The earth is wide, and room enough for them and us. Each have their privileged space, and—

"He that hunts
Or harms them there, is guilty of a wrong;
Disturbs th' economy of nature's realm,
Who, when she formed designed them an abode."
Smithfield, R. I.

A. T.

For the New England Farmer.

WORN OUT SOIL.

The exhaustion of the soil, which for so long a time has been carried on in New England, will not be fully realized till there ceases to be any unoccupied land in this country. It is generally admitted that land which a few years ago would produce fifty bushels of grain, has been so impoverished, that it will not produce fifteen bushels. It has been truly said, that "there is nothing lost on a farm, unless it be burned or drowned."

But I think that it can be truly said, that whatever is burned or drowned is not lost. For the burning combustibles ascending to the clouds in smoke, return to the earth in the genial dew, and refreshing rain, and the carbon which is thus diffused in the atmosphere is absorbed in vegetation.

From our over-tasked soil, yielding her abundance of produce, which is sent to foreign shores, there is nothing left to restore its healthful vigor. This fact should teach the farmer the utility of so diversifying his labor, that it would be less exhausting to the soil, and check the desire of exporting the best product of the land, and receiving in return that which will yield him nothing but leanness of body and barrenness of soul.

Quite a difference in this respect exists between this country and England. The latter exports her metals and her manufactures, and her various productions from under the surface of the earth. Also the various manufactures of silk, cotton, and wool. She imports vast quantities of food from her less provident neighbors, all of which is consumed by her various operatives in the manufacture of metals, wool, &c., &c., a part of which is returned to the soil, which so enriches it as to produce threefold more than it would otherwise do. We on the contrary import metals and manufactures, which will never mingle with the soil, and export vegetable fertilizing matter the bulk of thousands and thousands of acres.

England retains all the elements of her fertilization existing in the refuse of her own crops, and also that of her imported food, while instead of encouraging the creation of consumers in part, in the place of producers alone, we compel the American agriculturist to export a large part of the fertilizing elements of each crop to nourish foreign production.

April 26, 1852.

BLIND TEETH IN HORSES.—William Little, of Poland, Ohio, relates a case of a stallion of his having gone entirely blind without any apparent cause. A friend who examined him, found "blind or wolf teeth," which were immediately knocked out, and the horse soon recovered his sight.—*Albany Cultivator.*

EMPIRE STATE.

The above engraving, procured expressly for our columns, represents the beautiful horse, called by his owners, Messrs. TROWBRIDGE & MATHES, "Empire State." They purchased him of a gentleman in New York, about one year ago, who valued him for his qualities as a business and pleasure horse, being safe, of fine figure and action, and of great speed and endurance. The present owners have recently refused \$3000 for him, and prices varying from \$100 to \$200 have been offered for colts of his at four months old.

This horse was raised in Wyoming Co., N. Y., will be eight years old the coming summer, and is a natural trotting horse, a proof of which was had at Cambridge Park last fall, in a trial for a purse with the celebrated trotting horse "Flying Morgan."

The said Morgan came here from Vermont for a trial of speed with a mare of the Black Hawk stock, and beat the mare. This horse afterwards contested with the Flying Morgan horse, and won the race, we are informed, with perfect ease, in 2 minutes and 45 seconds, in harness, without fitting or training, and it is said can trot at any time in 2 minutes and 45 seconds in the same condition. With proper training he would trot much faster. It is believed by many that no entire horse in New England can compete with the "Empire State" in point of speed, style, blood, and docility of temper.

This horse is a descendant of the English horse Messenger, imported into this country about the close of the last century. His stock was distin-

guished as strong and valuable roadsters, and fast trotters, and some of his progeny were eminent as racers.

For the New England Farmer.

"TYING UP CATTLE."

MR. KERRON:—Were a school-ma'am to ask me that geography question again, "What are the principal bodies of water upon the globe," I know I should head the list with *Concord River*! The water is very *high* for the reason that it has been *falling* for four long days. Farmers in our neighborhood wonder when they shall "get hold of their spring work." We are all sadly behind hand. When the sun does get out in sight, there will have to be some "stirring round."

It seems the editor of the *Germantown Telegraph* is down on that "Tying up Cattle" article, published in the *Farmer* a few weeks ago. He won't admit the *improvement* part of it anyhow. He says the stanchion mode of tying up cattle has been in use in France a long time. How he got the idea that any originality was claimed for it, is more than I can see. He says, "There is (in the cut) a *Yankee* addition (oh, what does he mean by that!) perhaps patented (!) attached to it of ropes, cranks, and screws, which we regard as utterly destroying the French plan." He then gives the "*French plan*" without any of these obnoxious "*Yankee additions*."

The French plan of stanchion fastenings is, to have no hay-racks, but a good sized trough beyond the stanchions, (in front!) into which all the provender of (for) the cattle is placed, and which can be got at by the cattle only by the head through the opening made by the sliding of the upper part of the moveable bar. The cattle in a day or two, thrust their heads through this opening, which is quite large, as freely as they enter their stalls; when the tender passes along the en-

try or fodder-way, and with no more effort than it would take to throw a handful of meal into the trough, places the movable stanchion in its upright position, which, by a falling latch or key, fastens itself.

The *Telegraph* thinks this arrangement for securing the "unruly beef" altogether ahead of "our" way. To me it seems quite evident that some of the cattle would start back just at the critical moment and leave the "latch" to "fasten itself" and nothing else; the horns would happen to be on the wrong side!

The *Telegraph* suggests that the crank might move "when an animal was looking round or driving away a fly; and then the whole thing must be done over again." No, sir. Just pull out a spring key and bolt, and get in the struggler in a hurry.

The cut in the *Farmer* could hardly represent the whole plan. The rope might be brought down behind the cows and attached to a crank or lever. Now the *Telegraph* says, "the cattle in a day or two thrust their heads through as freely as they enter their stalls." Very good; then why not fasten all at once! The *Telegraph* says curiosity or a fly may keep some out. I think a man behind the cattle with an alder might counteract any opposition of that kind. It would be better to feed the cattle before driving in, and they would not hesitate about going to their places.

The *Telegraph* thinks the letting so many loose at once would be perilous in the extreme. With a proper number of wide, sliding doors, there can be no danger.

The *Telegraph* concludes his article by a warm approval of the stanchion method, but bids his readers beware of the "ropes, cranks, pulleys, &c., recommended in the east." W. D. B.

Concord, Mass., April 21, 1852.

For the New England Farmer.

CISTERN VS. WELLS.

MR. EDITOR:—I have seen it stated, where or by whom I do not now recollect, that the water which annually falls from the various out-buildings of the farm was sufficient to supply the wants of the ordinary amount of stock, during the season. And it struck me quite forcibly that such an amount of water, judiciously preserved, together with an apparatus properly and systematically arranged, might be made to supply the place of a well at much less expense and decidedly superior in point of convenience. If you or any of the readers of the *Farmer*, who have had any experience in this method, will be pleased to report progress, or give us a system of their operations, they will certainly confer a favor.

Yours, &c.

R. H. HOWARD.

Burlington, March 18, 1852.

A RAPID GROWTH.—It has been stated to us that Mr. SYLVESTER NEWTON, of Southboro', Mass., grafted an apple tree in 1848, and in 1850 he gathered from those grafts nine barrels of good marketable apples, of the Baldwin variety! Well, we are glad of it,—but if we get them at that rate in four or five years after setting the scions, we think we do better than most of our neighbors.

For the New England Farmer.

THE HISTORY OF THE APPLE TREE.

BY S. P. FOWLER.

[CONCLUDED.]

The subject of heading down old decayed apple trees, and renovating such as are hastening to decay, although an important one to many cultivators, has been but seldom mentioned in modern fruit books. It is to the old writers, who wrote forty or fifty years since, that we must look chiefly for information upon this subject. It was by Mr. Forsyth, an English gardener, that we were made acquainted with a method of renovating diseased and decayed fruit trees, in a "Treatise on the culture and management of Fruit Trees," published by William Cobbett in 1803, being the first American edition.

Peter W. Yates, Esq., of Albany, wrote a communication, under date of Sept., 1803, containing his observations published in Forsyth's Treatise, wherein he says, I am fully satisfied that Mr. Forsyth's remedy affords a radical cure for diseases, defects and injuries, in all kinds of fruit trees; and that it may with equal success and advantage be applied in this climate, as in England. The chief value of this discovery was supposed to consist in a composition, which caused the wood to form rapidly, and soon to fill up and heal over large cavities, caused by rot, in old and neglected trees. It was likewise supposed to be equally efficacious, when applied to wounds, caused by grafting or the heading down of trees. When trees had become hollow, it was Mr. Forsyth's method to scoop out all the rotten, loose, and dead parts of the trunk, till he came to the solid wood, leaving the surface smooth; then cover the hollow with the composition. In a few years, if the cavity is not large, it would be filled with new wood. How much success, if any, in the renovation of old and decayed fruit trees in this country has attended the system of Mr. Forsyth, we are unable to say.

In the year 1802, Mr. Knight, the great English pomonologist, published some doubts relative to the efficacy of Mr. Forsyth's plaster, in renovating trees, where he observed of this quackery, [for which Forsyth was rewarded with a grant of money,] that it afforded a much better proof that he was paid for a discovery, than that he had made one. To make this composition of Mr. Forsyth's, take one bushel of fresh cow-dung, half a bushel of lime, rubbish of old buildings, half a bushel of wood-ashes, and a sixteenth part of a bushel of pit or river sand; the three last articles are to be sifted fine before they are mixed: then work them well together with a spade, and afterwards with a wooden beater, until the stuff is very smooth, like fine plaster used for the ceiling of rooms. Mr. Cobbett informs us, that Mr. Forsyth's method of curing diseased and decayed fruit and forest trees was, after a very minute examination, made by men of great skill, pronounced to be highly beneficial, both to individuals, and the public, and his Majesty, at the recommendation of both Houses of Parliament, granted him a reward of four thousand pounds. This treatise was translated into several of the European languages, and received the highest encomiums. In writing the History of the Apple Tree, we have thus noticed this once famous composition, which was probably one of the greatest humbugs [to use a word, not much used

in Forsyth's time,] ever found in the annals of horticulture.

Several years since, we used the plaster of Mr. Forsyth's, upon the wounds caused by pruning, and the stumps in two years were found to be rotten, where it had not been thrown off by the action of the frost. Paint, rosin, or gum, as a general thing, is better where it can be applied to cover the wounds upon trees, than alkaline plasters, which usually promote decay. We have before, in a previous article, written of the use of red or yellow ochre, made into a thick paint, to cover the wounds of trees. We have used it for several years, and like it much. Gum shellac, dissolved in alcohol, has been recommended by Mr. Downing. We have been informed by those persons who have used it, that they have found it beneficial, but difficult to keep from drying up. And its ingredients are not always easily to be obtained, particularly the alcohol, which we certainly do not regret. Whereas ochre and oil can be found at every paint shop, and usually at most country stores.

Trees that are old, and in a state of decay, can be rejuvenated by opening the ground around the trunk, and pruning the dead roots, if any are to be found, loosening the earth for the space of several feet, from the body of the tree, and digging into it some compost manure. Prune the tree carefully, being particular to remove every dead or diseased branch, and apply paint to the wounds, search the trunk, and large limbs for the canker, cutting out the diseased bark, and covering the bare wood with the ochre. If you discover cavities in the limbs or trunk, scoop out the rotten parts to the live wood, and fill up the hollow with cement, or mortar well made from coarse sand. The surface of the mortar, exposed to the weather, should be smoothed down hard, just filling the cavity, so that the growing lip of wood can easily form over it. Scrape all the moss and loose bark from the trunk and limbs, and apply the following composition or wash, made and used by Capt. J. S. Lovett, of Beverly, and recommended by him in Hovey's Magazine for the year 1850. I think it much better than any thing I have ever seen, as a wash for all kinds of trees. Capt. Lovett says:—I use a large vessel, say a tub, made by sawing a molasses hoghead in two, at the bung, which will hold about seventy gallons; in this tub I put a wheelbarrow load of yellow clay, and an equal quantity of fresh cow-manure, covering it with water. After soaking and mixing a day or two, I add half a bushel wood ashes, one pound of sulphur, six or eight pounds of soft soap, and mix well together; then slake half a peck of lime, and add to the above, using water sufficient to make the whole about the consistency of thin cream, which will nearly fill the tub; mix well together for several days. This can be best applied to the trees with a white-wash brush. When it is thought necessary to alter the tops of an old apple tree by grafting, it can be done, providing it is sound, and its branches are healthy. Should this be the case, it is best to begin by grafting about one-third of the top of the tree the first year, and the remaining two-thirds, composing the side branches, may be grafted in the two succeeding years. At the expiration of the third year, or second, if you choose, to impart more health and vigor to the tree, you may scrape the

trunk and branches, and apply the wash, likewise open the ground around the tree, and apply some well rotted compost manure or ashes.

When the branches of an old apple tree are unfit to graft, they may be headed down in the manner described by Forsyth, and buds or grafts put into the new shoots or suckers. It would be well at the same time to impart vigor to the tree, by stimulating manures or ashes, and by scraping the trunk and branches and applying the wash. But as a general rule, we are inclined to the belief, that old and decrepid apple trees are hardly worth the time and labor necessary to be spent upon them, to make them fruitful.

S. F. F.

Danvers, March 1, 1852.

REMARKS.—This number closes the series of admirable papers upon the "*History of the Apple Tree*." Mr. FOWLER has written them in a plain, strong style, with a spice of quaintness in his extracts and allusions to the old writers, which, added to their other merits, has rendered them very popular. They have been copied into other journals, and will prove valuable papers of reference.

We take this opportunity to thank the writer for his contributions, and to express a hope that his pen will not long remain idle.

BONE MANURE.

Bones, though of comparatively recent introduction as a manure, stand at the head of all miscellaneous articles used for this purpose. The improved machinery for preparing them has brought them into extensive use in Europe. In England it has been demonstrated that on dry sands, limestone, chalk, light loams, and peat, bones are a very valuable manure. That they may be applied to grass with great effect. That on arable lands, they may be laid on fallow for turnips, or used for any of the subsequent crops. That the best method of using them, when broadcast, is previously to mix them up in a compost with earth, dung, or other manures, and let them lie and ferment. That if used alone, they may either be drilled with the seed, or sown broadcast. That bones which have undergone the process of fermentation are decidedly superior in their immediate effects to those who have not done so. That the quantity should be about 20 bushels of dust, or 40 bushels of large, increasing the quantity if the land be impoverished. —N. Y. Farmer and Mechanic.

FRIED POTATOES.—A secret worth knowing.—I guess no Yankee ever forgot three dishes somewhat peculiar to his native land; these are codfish and potatoes, baked beans, and fried potatoes; and I also guess he never has found them, particularly the last, possessing that delicious richness which greeted his boyhood's palate. Natives of other lands don't know how to fry potatoes; yet 'tis an easy matter. There is but one secret. After you have washed, peeled and sliced them nicely, quite thin, put two quarts of potatoes into two quarts of hot lard—not merely melted, but hot, very hot, just as hot as it can be made without burning. That is the secret. Fresh fish should be cooked in the same way. Ditto doughnuts. It is "a secret worth knowing."—*The Plow*.

TRANSACTIONS OF THE N. Y. STATE AGRICULTURAL SOCIETY.

In the address of Professor Norton, of Yale College, before the Seneca County Agricultural Society, published in the "Transactions of the N. Y. State Agricultural Society," for the year 1850, we noticed at our first reading some weeks since, several errors, which it seemed to us important to have corrected. Professor Norton is a gentleman of learning, and deservedly high reputation. His contributions to the advancement of scientific agriculture, and the interest he constantly manifests in the *good cause* in which we labor, entitle him to our respect. And it is *because* the results of Prof. Norton's researches upon the subject of Agricultural chemistry are generally received without examination or question, that we have thought it proper to call attention to the mistakes which we have observed. The subject of analysis of soils, and of the grain, or other product desired, as a means of directing our farming operations, is attracting much attention.

We have a great curiosity to look into nature's laboratory, and see how she combines her various elements to form the plant and flower and seed. We have become at last pretty well satisfied that even nature works by *means*, and cannot form a grain of wheat without making use of already existing particles of matter in its production.

The address of Prof. Norton is upon the cultivation of wheat in New York, and especially on the analysis of wheat soils, and of the grain and other straw of wheat, with a view to a more intelligent cultivation.

Having given a table showing the "Composition of the Grain and Straw of Wheat," and another "Table to illustrate the Composition of Wheat Soils," he proceeds to show, by mathematical calculation, in how long a time the soil would be exhausted of some of the essential elements of wheat.

We first give his own language from the printed report, page 593.

"It is estimated that the weight of soil over an acre, taking it at ten inches deep, varies little from one thousand tons. In soil No. 2, there is about one-fourth pound of phosphoric acid in every one hundred pounds of soil; this would give five pounds in each ton, and consequently, two and a half tons to the acre, a very great quantity.

"One hundred pounds of wheat, it will be remembered, contain about two pounds of ash; forty bushels of wheat on the acre, weighing sixty pounds per bushel, would be two thousand four hundred pounds, and this would contain *one hundred and twenty pounds* of ash; one-half or *sixty pounds* of this, would be phosphoric acid. Supposing the grain to be sold off, and the straw only, or its equivalent, returned as manure, it would take between *eighty and ninety years* of unintermitted cropping to exhaust this soil."

According to our arithmetic, the latter part of the above paragraph should be as follows:—

One hundred pounds of wheat, it will be remembered, contain about two pounds of ash; forty bushels of wheat on the acre weighing sixty pounds per bushel, would be two thousand four hundred pounds, and this would contain *forty-eight pounds* of ash; one-half or twenty-four pounds of this, would be phosphoric acid. Supposing the grain to be sold off, and the straw only, or its equivalent, returned as manure, it would take *two hundred and eight and one-third years*, of unintermitted cropping to exhaust the soil.

The same error is found at page 599, where it is said, "Forty bushels of wheat, it will be recollected, carry off about *sixty pounds* of phosphoric acid." It should be *twenty-four pounds*.

On the former page, 593, we have it printed thus—"Even of chlorine, which is but *one-half* of a pound in every hundred, or only *one pound* in a ton, there would therefore be one thousand pounds or half a ton in an acre." Instead of "one-half of a pound in every hundred," it should be, as we understand it, *one-twentieth of a pound* in every hundred.

The next paragraph in the same page is as follows:—

"Of potash and soda, there are in the second soil about *three and a quarter* pounds in one hundred, or *sixty-five* pounds in one ton, amounting to *thirty-two and a half tons* per acre."

By reference to Table 2 on the opposite page it will be seen that in the "second soil" referred to by Mr. Norton, the proportion of potash is set down at 2.80, and the soda at 1.44, equal to 4.24, or *four and a quarter* pounds in one hundred, or *eighty-five* pounds in a ton, or *forty-two and a half tons* per acre.

In no spirit of cavilling or fault-finding, do we call attention to this matter, but we do it, because the adoption of these calculations as correct might lead to further errors, almost interminable. It is, in many soils, of vital consequence, whether a crop of wheat takes 24 or 60 pounds of phosphoric acid from each acre, although it is to be observed, that every error which has been suggested, weakened, instead of strengthening the learned Professor's argument! His positions would have been stronger had his calculations been accurate.

We commend the whole address to our readers, for its plain and practical treatment of a difficult though interesting branch of agricultural knowledge.

A mistake or two in his *ciphering*, by no means affects Prof. Norton's high claims to our respect and confidence. It would be strange, were there not a little chaff in so much good wheat. It is an old saying, that "the best sometimes err," and the present instance only illustrates its truth.

A GOOD HINT.—Always do as the sun does—look at the bright side of every thing; it is just as cheap, and three times as good for digestion.

For the New England Farmer.

WHAT SAVES THE POTATOES?

MR. EDITOR:—In your last paper, the *New England Farmer*, I notice a communication from Mr. L. Varney, of Sandwich, N. H., relative to the "potato rot," with some remarks and comments upon the theory of Mr. T. D. Morrison, of the same State, and of his claim for the \$10,000 reward offered by this State. Also some of his experience testing the theories of Mr. Morrison and some others who claim to be equally wise in the matter. Having read Mr. Varney's article, and coinciding somewhat in his views, the idea occurred to me that I would like to furnish the public with a little experience and observation of mine upon the same subject, providing the editor were willing. The experience and observation which I wish to relate took place about three years ago. That being the case, I may not have the particulars so distinctly in my mind as to relate them with that degree of accuracy which some others have done. Three years ago I planted about two acres of potatoes, quite early, which yielded a tolerable fair crop, and which were generally free from rot, though not quite, although there were some salt, lime and charcoal dust mixed with the manure. There was no corn planted with them, but some grew along side of them. They were manured in the hill, and planted in the usual manner of planting. I also planted the same season, about one-third of an acre of late ones after the same manner, a part of which grew in the shade of some apple trees, which on digging, I found to be very much affected with the rot. As near as I can remember, there was but one hill in the whole piece either in or out of the shade that produced perfectly sound ones, and that one hill yielded about a dozen of large clear white Chenangoes, and as I gathered them into my basket, the idea struck me that there must be some apparent cause for so obvious an exception. I therefore thought I would examine and see if I could discover what it was. So striking my hoe a little deeper into the soil, I dug out a piece of an old boot or a shoe, I don't recollect which, and I don't suppose it would make any difference which. Now whether this old piece of a boot or shoe, which was buried beneath that good hill of potatoes, had anything to do with keeping off the rot, and preserving them in a sound state is more than I know. I shall therefore leave it for more learned and scientific in such investigations to determine. But would advise them, that if they should come to the decision, that scraps of old boots and shoes, planted in a potato field is a remedy against the rot that they be careful how they recommend them and do it with

CAUTION.

Newton Centre, April 12, 1852.

MORE SMILING.

It is noticeable that our agricultural papers, especially the later ones, are discarding the over-did gravity and dullness of old, thought necessary, and manage to say a cheerful word now and then, or to throw in a breath of humor, "or to smile a smile;" as though the double muscles with which people do their laughing were made for something. We never could see why it was necessary that works on agriculture should be made as dull as possible. Why not jump a jump once in a while; why not cachinnate? All that is said will be just

as true and the boys and girls will like it a good deal better, and be much more likely to begin to think that farming is not of necessity the stupidest of business. This has always been our notion and when a good idea or a little turn of humor come along we did not turn out for it. We are glad to see others coming to like conclusion. Here is the *New New England Farmer*, for instance, which actually perpetrates a joke occasionally—a thing which would have sunk the old ones. We begin to believe the song when it talks about "a good time co ming."—*Prairie Farmer*.

For the New England Farmer.

SLAVERING IN HORSES.

DEAR SIR:—A year or more ago, I answered in the columns of the "*Cultivator*" a letter, (the author I do not remember,) setting forth that slaving was caused by cobwebs. I stated that I was convinced that *lobelia* was the principal, if not the sole cause. After so much controversy, and so much diversity of opinion as to its cause, I resolved to make some further experiments, intending to give the result to the public. I have always been a friend to the horse, and have, to some extent, studied his diseases. It has been contended that slavers was the effect of eating white clover, sorrel, cobwebs, &c., &c. I think my experience will prove that some of the above are not the cause of slavers.

1. Having a pasture almost entirely covered with white clover, I confined two horses in it for about ten days, when the slaving season commenced; neither of which showed any signs of slaving.

2. One horse was then put into a pasture, in which was considerable *lobelia*; the other into a pasture in which I have never been able to find any *lobelia*; the feed being red clover of first year's growth, but which, like too much of our clover, was well sprinkled with sorrel. After remaining in these enclosures about two weeks, the horse in the pasture of red clover and sorrel, showed no signs of slaving. The horse in the pasture where was plenty of *lobelia*, commenced slaving within four days after being turned into the pasture, and continued so to do until he was taken from the pasture and put to dry food. The 2d horse was then put into the pasture where the first one slavered, and in 48 hours began to slaver. Although these experiments were satisfactory to me, yet I resolved to experiment further. I gathered a quantity of *lobelia* about the time both horses were free from the disease, and mixed with good hay, with which I fed one horse, and fed the other with hay from the same mow without adding *lobelia*. They were fed in this way about a week. The one fed with the mixture slavered a good deal, while the other did not slaver any. I then collected and dried a quantity of *lobelia*, with which I have tried the same experiment upon different horses, with like results. I have also mixed *lobelia* with hay, and fed to a cow, the effect of which was, that she *driled*, and soon refused to eat the hay. I presume, had she continued to eat, it would have caused her to vomit. I should have stated that when *lobelia* was fed with hay to the horse, it was cut and mixed with provender.

From these and other experiments, I am con-

vinced that *lobelia* is the principal cause of slavers in horses. I have frequently used it as a medicine for the horse, with a view to cause sickness, and successfully; and believe it will produce the same feeling in the horse, as in man; and if the horse could vomit, *lobelia* would undoubtedly cause him to do so, instead of slaver.

I do not contend that *lobelia* is the only thing which will cause slavers; but I do contend, that I can produce slavers with *lobelia*, and I also contend that no horse can be made to slaver with either white clover, sorrel, or *cobwebs*.

As the season for slavers is fast approaching, I wish some of your readers would make experiments, and give the result to the public.

I have some cherry trees of thrifty growth, raised from the stone, which, for 6 or 8 years, have not failed to blossom very full, but never bear more than 4 or 5 quarts each. The cherries are large of heart, of a beautiful flavor. Will you or some of your readers tell me how I can make them "bear?"

PLOWBOY.

New Marlboro', Mass.

REMARKS.—"Plowboy" is entitled to thanks from the community for his patient and thorough experiments with the horses. Perhaps we might suggest a remedy for the cherry trees, if we could see how they are situated. Trees frequently fail to produce fruit because their roots cannot find the particular aliment which they like. From some cause they cannot expand themselves, or cold spring water flows in among them.

For the New England Farmer.

SHAVINGS—TAN—HORNS—BONES.

MR. BROWN:—Dear Sir,—Having a little patch of "terra firma," which I call my own, and which I intend to improve to the best advantage, as my means will permit, I have been very much interested in your valuable paper; (by the way the best agricultural paper I have ever read.) As I have seen you have been very willing to help others, I supposed you might help me; if you will, by answering the following questions, I shall be much obliged to you.

(a.) Are shavings and saw dust worth saving to put on any kind of land; wet land, for instance?

(b.) Is old tan, that which has turned black by being heaped together, worth anything for making compost?

(c.) Would old horns, skirts of hides, old lime, &c., be good for making compost? and would sulphuric acid decompose such a heterogeneous mass?

(d.) What are bones worth per ton or cord, for making manure with sulphuric acid?

If you or some of your numerous correspondents will answer the above, you will greatly oblige a young friend and subscriber.

Sanbornstown, 1852.

REMARKS.—(a.) They are both excellent for mulching trees, either old or young, and in rotting, enrich the soil as well as keep it light and porous. If you have them in large quantities, it would be very well to throw into heaps and mix with quick lime.

(b.) The old tan is worth but little—it is about as profitable on the highway as anywhere; it makes a capital country road.

(c.) Certainly, very good; you will find directions on this point by reference to former articles in the *Farmer*.

(d.) Whole bones sell for about ten or twelve dollars a ton, varying according to circumstances. The ground dry bone sells for \$2.25 per barrel of from 275 to 300 pounds to the barrel.

We answer the questions of our "young friend" with a great deal of pleasure, and only regret that they were not attended to sooner.

For the New England Farmer.

CULTURE OF FORESTS.

MESSRS. EDITORS:—Having recommended, in a former communication, the extension of forests, there may be some obligation upon me to impart aid in the prosecution of the important work, as far as the knowledge possessed can avail. This knowledge is very limited, and drawn almost exclusively from experience. Treatises on the subject are nearly all of European origin, and recommend processes requiring more labor than the objects in view would justify in this country. Transplanting from seed beds is the general, if not the universal practice in Europe. This seems to be attended with needless expense, excepting where it is desired to have the trees placed in regular order. Some kinds of trees we can take from existing forests, and transplant without much greater expense than must be incurred in gathering and sowing the seed. Young white pines abound in many forests; these may be carefully taken up and transplanted at any time from the middle of May to the last of July, and when the work is well done, will generally live and sometimes grow nearly as well as seedlings. The smaller the trees when taken up, the greater will be the probability of success. The pitch pine transplanted will sometimes live, but we have never seen it grow well. The birch generally lives after transplanting, but does not grow as well as from the seed. And this is supposed true of most of the deciduous forest trees; the transplanting of them beyond purposes of ornament should not be much encouraged. They can be easier raised from the seed and will grow more shapely.

Seed of the locust should be planted in May, soaked in scalding water, it will vegetate very soon. The young plants should be carefully cultivated the first year, after which they will grow rapidly, if the worms do not attack them, but this so often happens, as greatly to discourage the propagation of these trees, which otherwise would be in higher estimation than almost any others pertaining to the forest.

The spring is a favorable season for planting forest seeds generally, but the difficulty attending the preservation of several kinds in a good state through the winter, induces fall planting as preferable. Acorns and chestnuts cannot be kept in such a state; they will vegetate in the spring without great care and considerable labor. The seed of pine might keep well in the cones, but as this will bear only a very light covering, it is best to sow it on the surface in the fall, and the action of the

frost will cover it sufficiently. The same is true of birch seed; it is often entirely lost under the operation of the harrow; it is best to leave it on the surface where nature casts it, and in the same season of the year. After sowing, birch and pine require no other attention beside keeping cattle from the ground. Young oaks should be cultivated several years, and when this is omitted, the roots may be extended and better trees produced by cutting them all close to the ground in the spring, after they are three years old, but as several sprouts will grow from each stump, some labor will afterwards be required in thinning.

Various other forest trees can be raised from the seed, but the experience of the writer does not qualify him to offer any remarks on the manner in which it can best be done.

M. A.

Pembroke, March 26, 1852.

CONCORD FARMER'S CLUB.

Some of the farmers of the good old town of Concord, in this commonwealth, held stated meetings during the past winter for the discussion of any and all matters pertaining to their vocation. We had the good fortune to attend most of their meetings, and have been as much interested and instructed there as at any similar meetings we have ever attended. There may be some towns in Middlesex where here and there a single farm may be found surpassing in value and amount of productions, more than any single farm in the town of Concord; but take it as a whole, we doubt if many towns can be found where there are so many thrifty, intelligent and independent farmers as in this old town, famous for its revolutionary and interesting historical incidents.

The meetings of the farmer's club indicate a spirit of inquiry and progress, and will lead to a more systematic and thorough cultivation of the soil, and consequently to a larger profit.

We copy the annexed account of the last meeting of the club from the *Middlesex Freeman*, published at Concord, and intend to give hereafter an occasional sketch of their meetings, as published in that paper.

CONCORD FARMER'S CLUB.

The closing meeting of the club for the season, took place at the Middlesex Hotel, on Saturday evening, April 24. Nearly every member, accompanied by one or more ladies, was present, and also several invited guests.

The company assembled in the spacious parlors of the hotel, and enjoyed a social hour in free conversation, after which several short and appropriate addresses were made, which occupied the time until supper was announced. Precisely at 9 o'clock, the company sat down to the tables, where all entered with alacrity into an intimate and pleasant acquaintance with the rich gifts of Ceres and Pomona. The president then made a brief address, which was followed by a set of regular toasts, but interspersed with voluntary sentiments, stories, songs, and brief addresses. The occasion was altogether a most happy one. The ladies were animated and beautiful, the gentlemen gracious, but

not "unco glorious," the supper a nonpareil, the toasts sharp as a thistle, or as light as the thistle's down, and the songs excellent.

The committee had made the most perfect arrangements, so that everything came off precisely at the right time, without delay or confusion. The only thing to be regretted is that your reporter was not present.

Such were the closing ceremonies of the Farmer's Club. The meetings through the winter have been well attended, and the interest in them continually increased, and cannot have failed to prove beneficial in many respects.

Truly yours, A FARMER.

Concord, April 26, 1852.

THE POOR MAN'S BOOK.

BY GEO. W. BUNGAY.

The winds have blown the smoke away—
Cold is the forge and hushed the mill;
The "toll-work cotter" rests to-day—
Traffic is mute and Labor still.

The unharnessed horse feeds on the green,
The laboring ox rests in the shade;
A holy calm pervades the scene,
And beauty smiles from hill and glade.

The modest flowers that light the clod,
Like drops of sunshine from the sky,
Bow their sweet heads and worship God,
And send their fragrant praise on high.

Beneath his fig-tree and his vine,
Beside the lowly cottage door,
The poor man reads the precious line
Of promise to the humble poor.

The Bible is the poor man's law,
A blessed boon to mortals given;
A ladder such as Jacob saw,
With angels coming down from heaven.

N. Y. Tribune.

CLEANLINESS FOR PLANTS.

"If as much washing were bestowed, in London," says Dr. Lindley, "upon a pot plant as upon a lap-dog, the one would remain in as good condition as the other. The reasons are obvious. Plants breathe by their leaves; and if their surface is clogged by dirt, of whatever kind, their breathing is impeded or prevented. Plants perspire by their leaves; and dirt prevents their perspiration. Plants feed by their leaves; and dirt prevents their feeding. So that breathing, perspiration, and food, are fatally interrupted by the accumulation of foreign matters upon leaves. Let any one, after reading this, cast an eye upon the state of plants in sitting rooms or well-kept green-houses; let them draw a white handkerchief over the surface of such plants; or a piece of smooth white leather, if they desire to know how far they are from being as clean as their nature requires."—*Hovey's Magazine*.

GRASS UNDER TREES.—By sowing nitrate of soda in small quantities in showery weather, under trees, a most beautiful verdure will be obtained. I have used it under beech trees in my grounds, and the grass always looks green. Having succeeded so well on a small scale, I have now sown nitrate of soda among the long grass in the plantations, which cattle could never eat. I now find that the herbage is preferred to the other parts of the field.

For the New England Farmer.

WHY HONEY BEES DIE.

BY JOHN M. WEEKS.

MR. EDITOR:—I observed in your March number of the present volume, some inquiry by a subscriber for the cause of the death of bees in the winter, at the same time leaving a plenty of honey in the hive. Now as Mr. Stockwell has answered the interrogatories of "Subscriber," so well, it perhaps seems hardly needful that the subject should be further discussed; but it appears to me that the whole ground is not covered by Mr. Stockwell's answer. A subscriber asks the "cause of death." Mr. S. assures in substance "depopulation, want of insect heat to expel the frost caused by their vapor." Now if I understand "Subscriber," it is to learn the whole cause, the answers, depopulation &c., having been made by Mr. Stockwell, the next important inquiry is, what is the cause of depopulation? I answer to wit: 1st, barrenness of the queen in the months of August and September.

The population of the hive in the winter is composed chiefly of bees that are hatched in those two months and in the early part of October when the season is favorable; very few, if any of the bees that are born before the middle of July, live to see the end of November; hence, we must depend much on the good bee season for raising the young in August and September, in order to supply the hive with a sufficient number of people to keep up the insect heat, so as to keep the honey warm and nutritive and enable the bees to move when the honey is exhausted where they first locate at the commencement of cold weather.

Every close observer of bees must have noticed that second and third swarms out of a hive the same season, especially when standing near other hives, gradually leave and join their neighbors, and the moths finish up what they have left behind. (*Most bee owners think the moths destroyed them, which is a great mistake.*) The cause of these desertions of the hive is usually barrenness of the queen. She is not often twenty-four hours from the cradle before she stands at the head of the family and leads out a swarm, and is incapable of laying eggs until she is at least eight days old. Now as the bees must remain at least seven days in their new tenement before they are sure of propagating their species, and add to their already diminishing numbers, they gradually leave until all are gone into the hives of their nearest neighbors; leaving at the same time what little they have done, to the merciless grasp of their enemies.

It is believed the queen does not often become barren in August and September, though eggs are not laid by them at this season of the year in so great quantity as in the early months of the season. But there is another cause of depopulation of the hive; it is this: There is some inefficiency in the pollen, or bee bread that is collected by the bees to feed the young in August and September, and the larva or chrysalis die in their cells after they are covered over by the bees, and these are not removed, and the hive dwindles away, and in the course of a year or two die out for want of animal heat in winter, or an intolerable stench caused by this rot in summer. I published some thoughts on this subject in the *N. E. Farmer*, Vol. I., No. 1, several years since, requesting others, lovers of the apiary to communicate on the same

subject; but I have seen nothing published since, touching this point. I then attributed it to atmospheric influence, or the same cause that produced rot in potatoes. I have seen nothing to alter my opinions there expressed, unless it may be the bees, for want of blossoms in good and healthful plants, are compelled to take the pollen from poisonous plants in the swamps to feed the young at the season referred to.

It has been supposed that the bee moth was one of the chief causes of the depopulation and destruction of the hive. I thought so for a great many years, and have published much on the subject. I am not disposed to exonerate this pest to the apiary, but would lay no more to his charge than he merits. Who ever saw a healthful, well-populated hive of bees infested and injured by moths? I never did! Depopulation, or other casualties are always first, and the moths are always secondary, and finish up the whole as the worms do the carcass of animals after the principle of life is destroyed, though they are more greedy and commence earlier, often and usually before the life of the hive is entirely extinct. But there are many other causes of depopulation of the hive. Bees have a great many admirers. Toads, frogs, water-insects, as for instance, the *spindles*, and a great variety of birds that are constantly swallowing them by dozens. I have taken about forty bees from the stomach of a single toad at one time. I have seen five toads and frogs lurking around a single bee-hive in the edge of the evening ready to take the bees as they came in heavy laden from the fields, where they chanced to drop down about the hive, or stopped to rest a moment before they entered their tenements; the same evening, in walking around my apiary with a candle in my hand, I counted about twenty of these reptiles, or bee eaters. But the most prolific of all causes is occasioned by allowing hives of bees to stand too near each other during their working season; bees standing close by each other were so liable to blunder into the wrong door, that it soon becomes a matter of indifference with them which hive they enter, and no hive will fight a bee that comes laden with honey and pollen and offers to make a deposit. Thus the contiguous hives soon acquire the same scent, and the bees of each mingle chiefly as one swarm.

Bees do the best to stand from one to three or four rods apart during the working season, but should by no means be moved a single foot after they are settled in work. Let all the hives be carried into a perfectly dark room, with no bottom boards on the hives, suspend them so as to let all accumulations of filth and dead bees drop from the hive during winter, and set every stock precisely where it stood the year previous, by the middle of March in Mass., a little later in Vermont, as the climate indicates. But the length of this article reminds me that it is time to lay down my pen.

Respectfully yours,

J. M. W.

West Farm, near Middlebury, Vt., March, 1852.

AMOUNT OF FOOD REQUIRED BY ANIMALS.—Of hay, an ox requires two per cent. a day of his live weight. That is, if the ox weighs 2000 lbs., he requires 40 lbs. of hay. If he is working, he will take two and a half per cent. A milch cow should have three per cent. of her weight, as she is proportionably lighter than the ox, and part of

the substance of her food goes to form milk. A fatting ox may be fed five per cent. at first, four and a half per cent. when half fat, and afterwards four per cent. This is independent of other food. A grown sheep will take three and a third per cent. of its weight in hay, to keep in good store condition. Animals in a growing state require most food, and it is very poor economy to stint them.—*The Plow.*

A NEW FARM SCHOOL.

If our good old commonwealth does not plume her wings a little, she will lose the glory of establishing the first *Farm School* within her borders. We have recently learned that Dr. CHARLES SIEDHOR, a gentleman from Germany, and in 1846 the Principal of a boarding school for boys, at Newton Centre, has established a school for boys at Lancaster, in this State. The farm contains 112 acres of wood, meadow, pasture and tillage land, and buildings fitted for the convenience and comfort of the pupils, both as regards study and indoor employments—including a large workshop, with lathes and a great variety of tools.

The course of instruction includes the English, Latin and Greek languages, mathematics, physics, chemistry, natural history and the German language.

Also instruction in some mechanical operations, such as turning in wood and metal, grinding optical glasses, making philosophical instruments, and the common mechanical work of the farm.

Music is also taught on various instruments; drawing, painting and the French and Italian languages, are also taught.

This school is located in the beautiful town of Lancaster, in this State; the town is healthy, being watered by the Nashua river, is pleasantly diversified by hills and sweeping vales, and contains an intelligent and cultivated population. From the references on Dr. SIEDHOR's card, we can entertain no doubt of his fitness for the post he has assumed, both as to character and qualifications.

For the New England Farmer.

BORERS.

A SURE PREVENTION AGAINST THEIR INJURING TREES.

Take a sheet of common brown paper and pass it round the tree quite down to the ground; this must be done by the 15th or 20th of June, before the eggs are deposited; draw up a little earth so the insect cannot deposit the eggs below the paper, and if the tree is rough, scrape off the rough bark. No danger of injuring the tree, as in good time the paper will drop off of itself. I have used this prevention for years, and I have never known it to fail to keep the borer from injuring the tree. One foot width of paper is sufficient.

Grafton, April 22, 1852. JOSEPH LELAND.

☞ That calm and elegant satisfaction which the vulgar call melancholy, is the true and proper delight of men of knowledge and virtue.

For the New England Farmer.

ON PEARS.

BY AN AMATEUR.

Among the many excellent pears now fruited and before the public, the *Bartlett*, by general consent, seems to take the highest stand. There may be a few others that surpass it in quality; but considering its many good points, its early and full bearing, its large size and beautiful appearance, together with the good price it brings in the market, it is justly a favorite, not only with the lovers of excellent fruit, but also with the cultivators. Amidst the competition of other pears, in autumn, the *Bartlett* readily brings in Boston, from 50 cents to \$2 per dozen. The little *Seckel*, (said to be the best pear in the world,) surpasses it in richness and sweetness, the *Belle Lucrative* equals it, and we think a well-ripened *Flemish Beauty* possesses a little more character. But, then, if we except the last, they are not so large, and none of them so handsome. Good on pear or quince.

The *Louise Bon de Jersey* is taking a high stand in pear culture. It comes in directly after the *Bartlett*, is large, handsome, and possesses a high vinous flavor. When fully ripened it is of a russet yellow, with a slight blush and numerous gray dots. Not being so well known as the *Bartlett*, it may fall a little short of it in price. It is a hardy and vigorous grower on quince or pear roots, and a good bearer.

The *Duchesse d'Angouleme* is a noble foreign pear, and frequently grows to an uncommon size. The Mass. Horticultural Society have a specimen in preservation that weighs 24 ounces! This fruit is so rare and choice, that but comparatively few persons have tasted it in this country. Very difficult to ripen, even on the quince, and in New England, supposed to be worthless on the pear stock. The tree is a luxuriant grower, and good specimens of the fruit are fine in quality. November and December.

The *Flemish Beauty* is one of the most promising of foreign pears. (See engraving *N. E. F.*, volume I., page 9.) Mr. C. M. Hovey says that he thinks it will prove to be the true *Beurre Spence*, which Dr. Van Mons thought was the best pear he ever raised. Should a person not be so fortunate as to get hold of one from any other source, by watching the sale of choice fruit in the market in autumn, he may be able to procure one by paying five or six cents! The fruit is large, turbinate, yellowish green, with some russet; flesh coarse, white, very rich and juicy. Having eaten some good specimens last autumn, I was almost tempted to call it a monstrous *Seckel*. I had heard it much praised, but it surpassed my expectations. This fruit is valuable over most foreign varieties, as it promises to do tolerably well in the orchard. Grows well on the pear or quince. Should be picked early. Among the many pears exhibited last fall at Salem, this pear outshone all.

Winter Nellis.—This is a pear of medium size, said to be "A No. 1." It is sweet and juicy, and in eating in the fall and winter.

Beurre d'Arenberg is in many respects like the *Winter Nellis*, but rather more vinous in flavor. They both deserve extensive cultivation.

Glout Morceau is an excellent sweet winter pear, and as the trees advance they ripen their fruit well. It is rather above the medium size,

very smooth and green till fully ripened, when it assumes a most beautiful and clear straw color. These three last named varieties are the best table winter pears.

The *Vicar of Winkfield* is extensively cultivated, for a new pear, but is not first rate in quality. Yet it is large, handsome, a great bearer, holds to the tree well, and is a late keeper. It is therefore profitable. We saw some of the most beautiful specimens in this city this spring, picked from a dwarf tree, that were selling from 20 to 50 cents each. The shape of this pear is long and symmetrical, of a smooth greenish yellow, frequently with a beautiful blush. Excellent for cooking, sometimes fair for the table—more especially when pears are scarce.

Beurre Diel is a large autumn pear; turburate, russet yellow, coarse, melting and sugary, when brought to perfection. Needs a warm location—showy and sells well in market.

The *Belle Lucrative* has received high commendations since its introduction into this country, and is said to have but few equals. The fruit is of medial size, turbinate, pale yellowish green, rather rough; flesh white, fine, sweet and excellent. A vigorous grower and good bearer on quince or pear. Requires a warm sandy loam. Sept. and Oct. (See engraving, vol. I. page 361.)

Fulton.—This is an American pear, raised in Maine, and one of the best and most beautiful of small fall pears—a little gem, which occupies the same place among pears that the brilliant *Fameuse* does among the apples. It is plump, uniformly of cinnamon color, flesh white, juicy and rich. It grows fair is a prodigious bearer, matures well, and is admirably fitted for orchard culture. Last autumn we saw a medium sized tree of this kind in the garden of the late Capt. Manning, of Salem, that was one brown mass of fruit.

The *Dix* is a rather large and excellent native pear, yellowish russet, with a blush, and keeps late; but very difficult to raise. As it bears late on the pear stock, the quince is preferable. Samuel Walker, Esq., of Roxbury, says it will yet be as popular as the Bartlett. The French cultivate this Boston pear, and send us their trees.

The *Bloodgood* is a fine, medial-sized early pear, (Aug. into Sept.) and is generally preferred to the Jargonelle by those who are acquainted with it.

The above-named pears I consider valuable in a large collection, and perhaps they embrace the best for a smaller collection. There are many other new varieties—both foreign and native—which promise well, and would deserve notice, if space permitted. Swan's Orange is extravagantly praised by C. M. Hovey, Esq.; and hardly a less encomium was bestowed upon the Van Mons Leon le Clerc by Mr. Walker, in 1847. But pears vary in different years, and so, perhaps, do men's tastes. That we have an excellent variety of them under cultivation no one can deny; nor can any one wish to increase the list; but, in the nature of things, it will be increased, while some of its number will be discarded.

CARROTS.—We hope our farmers will not let the present season pass without putting in a quarter or half acre of the *Orange Carrot*. We know of no crop, occupying so small a space of the farm, or demanding so little of the labor of the cultivator, affording such valuable results, as that of the car-

rot. The seed can be had at most of our seed-stores.—*Germantown Telegraph*.

NUMBER OF PLANTS ON AN ACRE.

The following table shows the number of plants contained in an acre, planted at the several distances specified in the columns marked "feet apart." For example, an acre will contain 10,890 corn-hills two feet apart; 2,151 four and a half apart, &c. These numbers are obtained by dividing 43,560, the number of square feet in an acre, by the square of the number of feet the plants are distant from each other; thus—the square of 2 is 4, and 43,560 divided by 4 gives 10,890, as above. If the plants be set in an oblong form, as five feet by six apart, multiply the two distances together, and divide 43,560 by their product, for the answer. When setting out trees, farmers generally name the distance in yards. In this case, divide 4840, the square yards in an acre, by the square of distances apart, if they be equal, or by their product if they be unequal, and the quotient will be the number of trees in an acre. For example: at 7 yards apart, an acre contains 98 trees; for the square of 7 is 49, and 4840 divided by 49 gives 98, the nearest whole number. If the distances be 7 and 10, their product is 70, and 4840 divided by 70 gives 69 trees.—*Newbern Spectator*.

Feet apart.	No. plants.	Feet apart.	No. plants.	Feet apart.	No. plants.	Feet apart.	No. plants.
1	43,560	1½	19,360	2	10,890	2½	6969
3	4840	3½	3556	4	2722	4½	2151
5	1742	5½	1440	6	1210	6½	1031
7	869	7½	774	8	680	8½	602
9	557	9½	462	10	435	10½	395
11	360	12	302	13	257	14	222
15	193	16	170	17	150	18	134
19	120	20	108	25	69	30	48
35	35	40	27	-	-	-	-

For the New England Farmer.

THE STRAWBERRY.

MESSES. EDITORS:—I have been a constant reader of your paper from the commencement of its publication in pamphlet form. As I have not seen much on the strawberry culture in its pages, I will write out some of my thoughts, and give you some details of my experience in strawberry culture.

Mr. Downing, in his book on fruit and fruit trees of America, says, it occasionally happens from carelessness, that only imperfect or half-sterile plants of a sort are cultivated in some neighborhood or in a whole county; and this arises from the fact that none but imperfect plants may have been received by a person ordering a new sort. In this case, either the sort may be rejected—perhaps the better course—or resort must be had to other plants, having stamens in abundance, to grow with it and fertilize it. Hence the fault found by many persons with the poorness and unproductiveness of some celebrated sorts, which we all know were perfect in their blossoms at first; they have only received imperfect or sterile plants. He says, if a bed has become entirely sterile, it is better to destroy it, and get a fresh stock; and when this is obtained, to preserve it in a bearing state, by selecting the runners only from perfect plants.

Mr. Longworth says that a plant, be it staminate or pistillate, never changes its character by run-

ning, but preserves its primeval character. On this point my experience and observation lead to the same opinion. I do not think they deteriorate or change, or can change their character in any respect by running. The runner, or new plant, is a sucker which takes root on the surface of the ground. A sucker from the root of the plum will have the same characteristics and habits of the parent tree, and many of the damsons are propagated in this manner. It is the same with the pear. If we wish for new varieties, we must grow them from the seed.

I have been engaged for several years in the cultivation of strawberries for market. When I set a new bed of plants I make no choice between strong or weak plants. The first plant made is stronger because it is older, and will bear more fruit if it remains in the bed than the younger plants; if it is moved the fruit will be lost. Therefore I take the plants that grow in the spaces between the rows, which are generally the weakest plants. Each plant will produce some fruit the season it is set, which I do not gather. The next season new plants will spring from the seed which fell the previous season, if they are not taken out, the bed will be filled with seedlings, and these seedlings will in two or three years overrun and take possession of parts of the bed, especially of slow growing kinds, such as Hovey's seedling. The better way is to plant from beds but one year old, and if the plants set were true sorts, the runners will be the same.

When we order a new variety and do not get the true sort, I do not think the nurseryman intends to palm off spurious sorts. He may have never had it, although he might have paid for it, and got a seedling from it, or his bed might have seedlings grown in it. Some strawberries produce the same from seed with no perceptible difference—such as the Wood and Alpines, which are perfect in their sexual organization, while the Pines are generally deficient, in pistils or stamens, or have one or the other imperfectly developed.

North Danvers.

For the New England Farmer.

VEGETABLE POISONS.

MR. EDITOR:—I saw in the last season's paper inquiries for what would cure vegetable poison, and cures prescribed; some of one thing and some of another, and one of buckwheat flour and vitriol, which is no doubt good. I feel disposed to give you a recipe of my own, which would have paid me eight years ago for five numbers of your paper in a single season. It is as follows:—First scratch as long as it feels good, then take wild salandine, (some call it jewel weed,) crush it and rub it on until it smarts well, then go to bed, and you will be ready for a good day's work the next day. It may need a few applications afterwards, but not many.

In another paper I saw mention made of tobacco-eating goats; if any one will call at my barn I will show them four tobacco-eating cows; throw them a tobacco plant, and they will leave good hay and eat the plant first.

Hartford, 1852.

E. E. PERSONS.

REMARKS.—If our correspondent's cows are in good health, they certainly do not manifest as much good taste and good sense as most cows do.

We can see how most weeds and insects may be a blessing, but how any good, present, past, or to come, ever was or is to be found in tobacco, is past our comprehension.

For the New England Farmer.

AGRICULTURAL COLLEGES.

MESSRS. EDITORS:—For a few years past, and up to the present time, there has been much discussion in our Legislature, and also in many of the public prints, in regard to the utility and expediency of establishing an institution of the above character in this State. And if I am right your paper, the *New England Farmer* advocates the utility of the scheme. Now as I take the *Farmer*, I have an opportunity of seeing, and examining the arguments which the different advocates put forth in favor of the project. Yet I have utterly failed to see its feasibility. This may arise from a limited knowledge and a want of a better understanding of the subject. It is true, I profess to be nothing more than a humble individual in the world, and make no pretensions to the superior wisdom and judgment of those more exalted in life. But as I just observed, I have never been enabled to see, from all the arguments which I have seen advanced upon the subject. That the agricultural interest of the State would be benefited by the establishment of such an institution. At least, to that extent which it had ought to, considering the outlay and expense which would accrue to the State in establishing such an institution and maintaining it. And I believe if the truth were known, that the opinions of nine-tenths of the practical farmers of the State would be found to correspond with mine in considering such an institution entirely unnecessary, and would prove an utter failure, so far as it would tend to benefit their interest.

As regards the means and modes for obtaining an increased and necessary knowledge for the improvement and advancement in agricultural pursuits they already exist, and are afforded to a very great extent in the numerous books and periodicals devoted to that interest, and also in the numerous agricultural and horticultural Exhibitions of the day. These afford a better and cheaper means of instruction than a College would. The farmers, so far as I am acquainted, do not desire any institution of the kind. They would not try to avail themselves of any of its advantages. They consider that it would not be managed upon a system calculated to improve their economical modes of husbandry. They consider that it would amount to little else than a grand and expensive experiment, whereby the State would subject itself to a great and enormous expense with no corresponding return, excepting, conferring upon a few men a rich and lucrative office, which they never were by experience calculated to fill, and an attempt to educate a few of the sons of certain families in an art which they are entirely unfitted by nature and habit to follow, and one which they rarely would adopt as an occupation.

I believe it to be one grand idea with the advocates of the scheme, that it will furnish an opportunity for the sons of some of our rich men, and also for some of the sons of those engaged in some of the more genteel pursuits in life, to obtain a knowledge of the art of farming.

Now the art cannot be taught to any advantage, except by practice. He who undertakes to teach it, ought to have acquired his qualifications by absolute practice: whether such an one would be selected to fill the Executive Chair is very doubtful. He ought to have a familiar acquaintance with most kinds of tools and implements, appertaining to the business, and also of the various kinds of farm work, which I fear, on a personal acquaintance, would have no very fascinating attractions to some of the young gentlemen who are now so eager to acquire their knowledge. My opinion in the inadequacy of the means proposed, rests upon their aversion to labor. Their previous lives unfit them for the severe tasks of the farmer. I judge partly from experience, but more from observation. The writer of these lines, has been engaged a part of his life in a pursuit much more favorable to his ease than that of his present occupation, with this consolation to comfort him, that it was a little more profitable. He also has been acquainted with many instances of young men from the country, who left their homes in early life to seek a fortune sufficient to enable them to return and purchase a farm. But after being engaged a few years in pursuits less toilsome, and more profitable, they lost all inclination to return to their original occupation. The above are some of my reasons for believing that it would not be a wise policy for the State to try the experiment of an agricultural college.

Yours respectfully,
Newton Centre, 1852.

W. A.

REMARKS.—We will just say to our friend, that to be "exalted in life," is to be useful and virtuous. No wealth, connections, or position, can exalt a man; he must exalt himself. It seems to be a foregone conclusion with him that an agricultural College (he calls it) under the fostering care of the State will prove disastrous every way. We think something useful may be done, and have considerable confidence in the wisdom of old Massachusetts that she will do it right; but approve of moderate counsels and expenditures. Cambridge has distinguished herself, and her teachings are of no more consequence than those which agriculture require. Let us do something.

For the New England Farmer.

NORTHERN LIGHTS.

GENTLEMEN:—In one of your late papers I noticed a request for information respecting the nature of Northern Lights—Aurora Borealis. The credit due for the discovery of this belongs to the Baron Von Reichenbachs,—a nobleman of Vienna. Some years since, he was engaged in making a series of experiments in Animal Magnetism, and found that strong magnets would produce deeper, quicker and more powerful effects, upon susceptible individuals, than any other combinations of matter. He found also that these magnets, when the rooms in which his observers were, were darkened, exhibited flames, and of course light. The light could be collected into a focus by means of a burning glass, and the flames being intercepted by any solid object, curled around it, like any other flame. This established in his

mind, that light and flame are two different substances. But not satisfactorily to others, otherwise than this. That flame, being the visible, and more often invisible combustion, or change of matter from a more condensed to a less condensed state—light is the result, which is literally a material, more expansive, by chemical action. And that as the same thing can produce only its consequence, light in all instances is produced by combustion, or flame, and nothing else. Over one of these magnets, sufficiently powerful to raise ninety pounds, the observer saw a light auroral cloud, which emitted tufts or streaks of light, the same as we see the auroral arc in the north, previous, and during a display of this meteor. The argument is therefore, that magnetic light is the same, whether exhibited by a small or large magnet; whether it is at the north and south poles of the earth, or the same positive and negative poles of small bodies. I will add that there is a strong probability that present researches will establish the fact, that there exists an immense ocean of fluid, imponderable by any instrument yet invented, and yet of sufficient capacity to float the most ponderable bodies. This I know on the outside of it appears to be sufficiently absurd.

Very truly, your ob't servant,

J. C. G.

For the New England Farmer.

HEMLOCK.

(ABIES CANADENSIS.)

MR. EDITOR:—I wish to call the attention of your readers to the beauty and importance of the hemlock. It is perfectly hardy, being found far to the north, even in the coldest portion of North America. It rises in the forest to the height, often, of sixty or seventy feet, and even more. It is often seen growing on rocky, exposed side hills, when few other things will flourish, as well as in better locations where it grows to greater perfection. When standing alone it forms a broader head, with less height. It will grow in dry or wet ground, though it does best where it is tolerably moist. In my opinion it is the most beautiful of all evergreens; and while collectors are zealously searching the remotest parts of the earth, and sending home the products of their labor—which often prove of little value—we strangely neglect to cultivate and prize the handsomest evergreen that can be found the world over; so far as my knowledge extends. Mr. Emerson, in his report on the trees and shrubs of Massachusetts, says; the young trees, by their numerous irregular branches clothed with foliage of a delicate green, form a rich mass of verdure; and when in the beginning of summer, each twig is terminated with a tuft of yellowish-green recent leaves, surmounting the darker green of the former year, the effect, as an object of beauty, is equalled by very few flowering shrubs, and far surpasses that produced by any other tree. It possesses a lightness and gracefulness—especially when the dark green mass is moved by the gentle breeze—that cannot fail to attract the attention of the most careless observer of the beautiful in nature; it is entirely free from that stiffness, grenadier-like appearance which some other trees of the same family exhibit. It is a happy, joyous tree; like the polite and vivacious Frenchman, it continually bows and smiles, alike in sunshine or storm, winter or summer; in the morning it wel-

comes by its glad smile and graceful motions the glorious orb of day, and as he sinks beneath the western horizon, it waves its tiny hands, as if to bid it a kind adieu for the night. When set on a lawn singly or in groups, it forms a dense mass, and produces a deep shade; perhaps it is best when planted in this way. I know a place where stands four or five noble hemlocks, beneath whose shade crops out a somewhat grotesque ledge of rocks—and I must say, though the location is far from good, that I never pass that spot without mingled feelings of love and admiration, and have often wished that I could live, die, and be buried there, that they might sing a requiem over the grave of a humble lover of nature's beauty. It is also valuable for screens and hedges; again allow me to quote from Emerson:—"As it bears pruning to almost any degree, without suffering injury, it is well suited to form screens for the protection of more tender trees and plants, or for concealing disagreeable objects. By being planted in double or triple rows, it may in a few years be made to assume the appearance of an impenetrable wall—really impenetrable to the wind and to domestic animals.

"A hedge of this kind, seven or eight feet high, on a bleak, barren plain, exposed to the northwest winds, gave Dr. Greene, of Mansfield, a warm, sunny, sheltered spot, for the cultivation of delicate annual plants. When I saw it the annuals, several of which were rare exotics, were beautiful; the hemlock screen was much more so." After having cited the above, it is useless for me to try to add anything in its favor as a hedge plant. I have spoken of some of its advantages, and now methinks I hear some one say it is difficult to transplant, and that it grows slow while young. The latter objection is real to some extent, it does not grow very fast—I mean small plants—for the first year or two; after that, if the land is good, it makes very good growth, though it grows even when young, as well, or better than many other things with which we take much pains, which are inferior to this. The former objection I shall answer by adding my own experience in transplanting this tree. In the spring of 1849, I pulled up about two hundred small trees, in height from a foot and a half, to three feet, out of the moss of a swamp, saving nothing on the roots; set them out immediately in a moist place; three-fourths lived and did well. The next year I tried the same experiment on a larger scale, got about five hundred, pulled them up in the same way, set them out as I did the others—four-fifths of them lived and did well; this spring I shall transplant some of them, and in two or three years I shall have fine trees for sale, from this lot. These trees have now a great many fibrous roots, and can be moved without loss. Last spring I tried larger trees from a different soil, a loam somewhat gravelly, moved about twenty-five, of sizes from three to eight feet in height, chose a moist day, took them up with a ball of earth, and set them out as soon as possible; when taking them up I was careful not to disturb the roots in the ball of earth. Every one lived, though last summer with us was the driest we have had for many years. From experience I am satisfied that they are not difficult to make live, if properly treated. That it does not occupy the position among our ornamental trees that it ought to, I think all will allow. I hope some of your

subscribers will try the experiment of transplanting it—if experiment it can be called—and perhaps sometime report success.

Yours, &c.,
Newton Centre, April 6th, 1852.

J. F. H.

For the New England Farmer.

CATTLE GNAWING BONES.

MR. BROWN:—Allusion was made in your paper not long since, to cattle gnawing bones. When this is the case can anything be given them to promote their health?

H. W.

Colebrook, April 19, 1852.

REMARKS.—Certainly; bones are ground and neatly put up in bags of fifteen to twenty-five pounds each, for the very purpose of feeding to cows. The pasture becomes exhausted of some of the peculiar elements which go to form the bones, and nature prompts the cow how to supply them; she gnaws old bones for hours together. Give her a small amount of this bone dust and she will gnaw no more bones, though they lie about her as thick as "bugs in cucumber time." The dust may be found at the seed store of Rugles, Nourse, Mason & Co., Quincy Hall.

For the New England Farmer.

THE PLOWMAN'S LIFE.

Upon the hill the sun is streaming,
On vale and meadow faintly gleaming,
In at my chamber-window beaming;
I wake, and bid me to the plow.
For me the redbreast cheerily singeth,
To yonder bough her way she wingeth,—
What glad heart-hopes to me she bringeth;
I wake, and bid me to the plow.

Let slumbering sluggards set the craven,
To vain, ignoble dreamings given,
But I will breathe the air of heaven,
The first fresh air of early morn.
Yes, let them sleep! the air seems sweeter,
And rosy Day seems coming fleetly,
When sleepy Sloth goes not to meet her,
To meet her at the early morn.

What health is in the breeze of morning,
What beauty in the flowers adorning
The dewy wayside, when at dawning
I wake, and bid me to the plow.
There is no earthly life that's purer,
There is no earthly joy that's surer,
There is no earthly bliss maturer,
Than he may have who guides the plow.

Ludlow, Vt.

S. H. INALLS.

FACTS ABOUT MILK.

Cream cannot rise through a great depth of milk. If milk is therefore desired to retain its cream for a time, it should be put into a deep narrow dish; and if it be desired to free it most completely of cream, it should be poured into a broad flat dish, not much exceeding one inch in depth. The evolution of cream is facilitated by a rise, and retarded by a depression of temperature. At the usual temperature of the dairy, 50° Fahrenheit, all the cream will probably rise in twenty-six hours, but at 76°, it will probably all rise in less than half that time, and when milk is kept near

the freezing point, the cream will rise very slowly, because it becomes partially solidified.

In wet and cold weather the milk is less rich than in dry and warm; and on that account more cheese is obtained in cold than in warm, though not in thundery weather. The season has its effects—the milk in the spring is supposed to be best for calves, in summer it is best suited for cheese, and in autumn the butter keeping better than that of summer. Cows less frequently milked than others give rich milk and consequently much better. The morning's milk is richer than the evening's. The last drawn milk of each milking, at all times and seasons, is richer than the first drawn, which is the poorest.—*Exchange paper.*

For the New England Farmer.

WIRE FENCE.

MR. EDITOR:—In the *New England Farmer* for May, there is an account of the proceedings of the eleventh agricultural meeting at the State House, Tuesday evening, March 30th, at which Hon. J. E. Gray presided; the subject for discussion being the "Subdivision of Lands and Fencing."

The President, in the course of his remarks, after expressing his preference for stone walls as being the cheapest and most effectual fence, alluded to Wickersham's iron fence, which could be put up for \$1.25 a rod, and also to a good wire fence which could be put up for less than 75 cts per rod.

Now as every farmer has not the materials on his farm, or within a convenient distance to build stone walls, resort must be had to other modes of fencing; where a temporary fence is to be built, the Virginia fence is frequently preferred; but as a permanent fence the cedar post and rail fence is generally used.

My object at this time is to learn where these wire fences can be obtained, and whether it would pay to purchase a wire fence costing from 75 cts. to \$1.25 per rod, in preference to purchasing posts at 17 cts. each, and rails at \$7.00 per hundred.

Perhaps you, Mr. Editor, or some of your numerous correspondents, can give the desired information, which will be thankfully received.

If the wire fence could supersede the zig-zag fence, or even the post and rail fence, a great improvement would be made in the appearance of our fields and pastures; nothing is wanting to accomplish this, but to convince people that the wire fence is the cheapest and most durable fence.

April 19, 1852.

H.

REMARKS.—Wickersham's wire fence may be obtained of Messrs. Ruggles, Nourse, Mason & Co., at Quincy Hall, Boston. We have no doubt about the economy of using wire fences wherever stones are scarce and posts are seventeen or even twelve cents each, and rails are seven dollars per hundred. We have wire fence which has answered all the purposes desired for a fence for two years, herding cattle in a pasture on one side of it, while on the other there was a heavy growth of clover. The cattle put their heads through the wires and fed the clover down as far as they could reach, but never broke a wire. But it would be better to place wires so thick at the bottom as to prevent

their reaching through. The wire used was, we think, No. 6, at six and a half cents a pound. Only two posts are necessary for any distance, if the ground is tolerably level; one at each end. Set a stout post, so deep and strong that you are sure of its remaining firm when you straighten up the wires. Bore the holes for the wires, pass the end of the bottom wire through, and wind round a piece of dry hard wood; then carry it to the post at the other end. Now comes what has always been found the difficult part of making wire fence—that is, straightening the wires. But nothing is more simple and easy, when we know how. The hole is bored in the post and the wire passed through some two feet. Take a round piece of hard wood five or six inches in diameter, and eighteen inches long, bore a hole near each end and one in the middle; pass the end of the wire through the middle hole, place the stick or roller against the post and turn the roller by means of iron pins in the holes in the end of the roller. You will soon find a power that will stretch or break anything short of a common-sized mountain. When you get the degree of tension desired, drive in a plug of hard, dry wood, by the side of the wire, unwind from the roller and fasten the end of the wire around the post or a spike driven into it. Put up the remaining wires in the same manner; then (your stake holes being previously dug two to three feet deep) set your stakes twelve feet apart, saw in their sides half an inch and rest the wires in the saw marks, fastening them with a nail. With good chestnut or cedar posts and stakes, and all well put up and painted, we have no doubt such a fence will last twenty-five years without much repair. It is handsome, cheap and durable, and may be made for less than fifty cents a rod.

We first used a horse and pulleys to straighten the wire, but soon studied out the plan of the roller, which we found to work to perfection.

For the New England Farmer.

LOOK OUT FOR YOUR HORSES.

FRIEND BROWN:—A few words of caution in this particular may prove very beneficial. Yes, I repeat, "Look out for your horses." There is no animal in the service of man that needs or deserves so good care as this noble animal. But I am sorry to say he does not receive the kind treatment and care he so justly deserves, save in a few instances. Rare would be the cases of diseases in horses, if they had kind and humane masters to take charge of them. True it is that nearly all diseases with which horses are troubled in body or limbs, are caused by carelessness and inattention on the part of their drivers.

The disease of which you speak, called "scratches," is indeed a troublesome disease, and one if not seen to in season, that often proves very injurious to the limbs of the animal. A person unacquainted with taking care of them, will often suffer horses to go for weeks and months with swollen legs, not knowing the cause. Certain it is that scratches

is often caused by the horse standing or being used much in the wind, and then allowed to remain in the stall, with the feet uncleansed, in a cold, moist place. I have a horse which three or four years ago was diseased in this way. He remained so nearly all winter, from the fact that I did not know how to cure him. But I finally tried a remedy, which very soon after the application effected a cure,—a lasting one,—for he has not been troubled since. This remedy was linseed oil, mixed with a small quantity of white lead, applied and well rubbed in. Other remedies may be effectual, but this had the desired effect in the case I have mentioned.

A. TODD.

Smithfield, R. I., April, 1852.

REMARKS.—The remedy mentioned above is also excellent for galls, but should be used cautiously, as the lead is a poisonous substance. We are always glad to hear a friendly word of that noble, but sadly abused animal, the horse.

A NEW GRASS.

It was the intention of the writer of the following letter that it should be read at a recent agricultural meeting at the State House, when the subject under discussion was *Grains and Grasses*.—From some cause it was not read, and it came to us too late to be connected with the report of that meeting. The subject of grasses deserves more attention than it has yet received. The universal crop of New England, timothy, or herds grass, we are inclined to think is not the best among the grasses for hay. We hope the grass of which Mr. WILLARD speaks will have a widely extended trial.

Lancaster, Feb. 23, 1852.

TO HON. ISAAC DAVIS :

Dear Sir :—Feeling deep interest in the object of the agricultural meetings held in the State House, and learning that you are expected to preside at the next, and that the subject for discussion is to be *Grasses*, will you permit me through the chair to offer a brief description of a new variety; which I think, from some years' careful cultivation and various experiments, worthy to be known and circulated as a valuable accession to those at present cultivated by our yeomanry. It has been analyzed, and is said to be a species of *Bromus*, materially different from any thing I had ever seen, till I found a single plant where I had sown with imported English turnip, dressed with guano.

Its surpassing luxuriance and richness as feed in pasture, and for summer soiling; its hardiness and verdure, even in seasons of drought, and in sandy soils, when and where other grasses fail; the heavy crops it yields in rich soil, and the avidity with which it is eaten by all kinds of stock; its power to hold up clover, (when sowed with it,) by its elasticity, so as not to lodge, and become slippery and bad to mow; its peculiar adaptation as feed for milch cows, both green and dry; the superior fertilizing properties of the fleece plowed in green, for manure, particularly for wheat and a turnip crop, are among its properties. And last, though not least, the value of the seed, (besides to sell and to sow,) as food for poultry, of which I

was not aware till since harvesting my last crop, which being abundant, I have found the advantage of a free use of it. The size of the seed is between that of millet and rye. I think it may be preferable to hemp seed, for canaries, at least to mix. I have tried it boiled and ground, for swine, horses and neat stock, and am satisfied, from the fondness of every animal for it, and from its gluten, that, in its nutritive properties, it more resembles flax seed than any other. From the high price, and the demand for the seed, I have not used it sufficiently to speak confidently of its fattening value; but intend to know, by fair trial. We cut it for seed as soon as it begins to turn yellow, as it shells very easy. The straw is of course good fodder or bedding. We had six tons thrashed last week.

Very respectfully yours,

BENJAMIN WILLARD.

For the New England Farmer.

A SUGGESTION FOR FARMERS.

After the farmer has examined and repaired all his farming implements that are worth repairing, and thrown away all his old-fashioned, ill-constructed plows, harrows, &c., and ordered those that will do his work easily, and in a proper manner; and after he has planned every piece of work to be done during the coming season, such as plowing, fence making, draining, building, &c., there is one piece of work, which, if not already done, should not longer be neglected, and this is, putting windows into the gable ends of the barns.

These should be made to open and shut by sliding horizontally, or if there is not sufficient room for this, they may be hung on hinges at the top. In either case they should be opened and shut by means of cords and pulleys; the end of the cord reaching the barn floor, or within reach of the smallest boy that will ever be sent to shut or open them. Any practical mechanic will, with five pulleys and a sufficient quantity of cord, very readily do this. The whole cost will not exceed \$2.50 for each window, or \$5 to each barn, using new well painted sashes, with twelve panes of 7 by 9 glass. If they are done properly, no repairs will be called for in many years.

These windows are of great use in giving proper ventilation to the hay and grain, but of much more consequence to the health and comfort of the men who pitch and mow the hay. The air rarified by the heat from the roof passes out through the window, thereby creating a draft which is so much to be desired during the sultry days of July and August, making the barn as cool as the shade.

I applied these windows to three barns last season, and during the haying, was more than repaid for the trouble and expense incurred.

DAVID LYMAN.

Middletown, Ct., Feb. 18, 1852.

MASS. HORTICULTURAL SOCIETY.—We have received the addresses of the retiring President and President elect of this society, and also the schedule of prizes for 1852, which amounts to the sum of \$2,520.00. The amount appropriated for fruits is \$620.00; for vegetables, \$250.00; for bouquets, wreaths, designs, &c., to be awarded at the Annual Exhibition, \$700.00.

A MODEL BARN.

We have the pleasure of presenting our readers a Perspective View and Ground Plan of a Barn 36 by 60 feet, for a Hay Barn, Carriage Room, Granary, &c., with a Cow Stable, 33 feet square, with a cellar underneath for manure; the entrance to the cellar is at the south end.

We have long been of the opinion that there is scarcely any one thing in which the farmer is directly interested, which so much needs reform as that of the *Barn*. It is an appendage to the farm of the first importance, requiring so much time to be spent in it, both winter and summer, and having such an intimate relation to the profits upon the stock sheltered under its roof, that it is somewhat strange so few good barns are erected, and stranger still, that scarcely a *good model* is to be found in the State. Four years ago we built a barn of the best materials, and as we then supposed, upon the most approved plan for the stowage of fodder, and the comfort and convenience of the cattle and those who were to attend them. It has its ample cellar, ventilator, doors moving on rollers, &c., &c. In its construction, we certainly gained two points, viz.:—A fine place to manufacture manure, and a pretty equal temperature for the stock. The space for stowing hay, however, is cut up into too many parts, affording only scant

room and requiring a great deal of labor in the busy season of haying to stow it away. The breath from the cattle, together with the vapor arising from the manure, which defies all attempts to keep it below the floor if the cellar is warm, covers, not only the floor over the cellar, but the beams, and the whole under side of the roof, with pearly trickling drops for weeks together during the winter.

If the doors are thrown open in order to evaporate this moisture, you lose the benefits you have been seeking in making a tight barn, by reducing the temperature so much that cattle require *more* food, while the effect is to *reduce* the flow of milk in the cows.

We could refer the reader to barns built in the most thorough manner, but lacking the proper ventilation, where the timbers over the cellar have become so weakened and dead in a few years as to snap square off like pipe stems, and the shingles flying by dozens at every fresh gust of wind.

The plan furnished above by Mr. HAMMOND, and which we have thought so well of as to cause it to be engraved, seems to us to come nearer to the wants of the farmer than anything we have ever seen before. And it has this merit, that a cheap barn may as well be constructed in this manner as an expensive one. We have no doubt that Mr.

HAMMOND's new views in relation to barns will be the means of working a considerable change in their construction. He will furnish plans, working drawings, and everything necessary for a thorough understanding of the matter, at very low prices. In accordance with his views, old barns may be altered so as to afford the greatest convenience at the least expense. We therefore advise those about building or altering barns to give him a call.

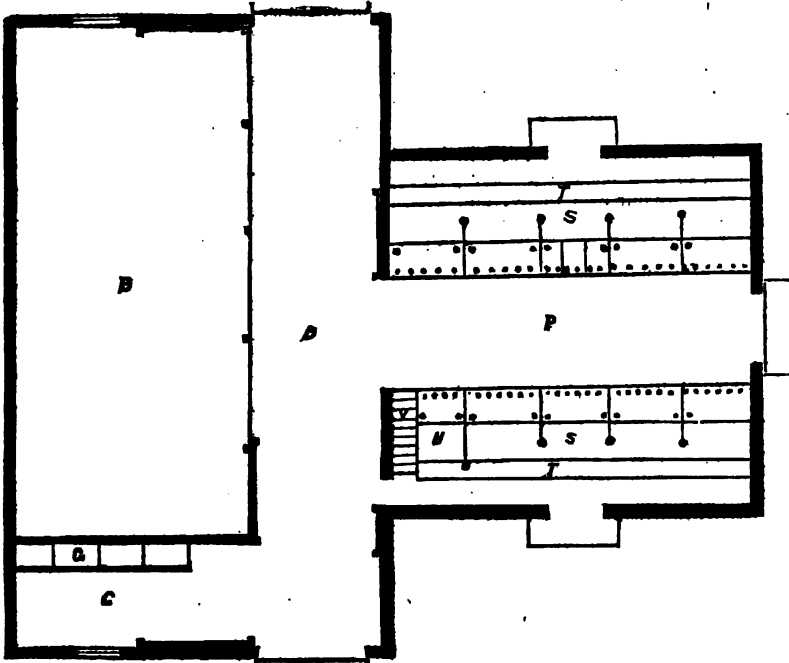
The drive way for the hay barn is on the south side, throughout the length of the barn, having a bay for hay 24 feet deep; height of posts, 19 feet. The scaffolding over the barn floor in the two first sections to be 14 feet, in the clear—the third and fourth sections to be eleven and a half feet in the clear, the remainder 14 feet.

C, Carriage room. B, Bay for hay. D, Drive way. G, Grain and meal bins. P, Passage way between cow stables. S, Stalls for cows. H,

Horse stable. T, Trench behind cows. V, Stairway. This plan is to have three windows of ten by fourteen glass, twelve lights to each, on the front or west end; also two of the same size in the opposite gable end. Two windows in each side of the stable, of six lights each, ten by fourteen, with a blind to slide with each sash. All outside doors put on rollers; two sky lights in the roof of stable to serve as ventilators.

One grand object to be obtained is to separate the cattle stable from the hay barn by sliding doors above and below, to prevent the hay being damaged by the vapor and ammonia which are constantly arising from the cellar. A small barrow of some simple construction on a truck to convey the hay to the feeding passage will save much time in feeding.

Many large and valuable barns have been very much damaged by being placed over a manure cellar without proper ventilation.



GROUND PLAN.

HILLING CORN.—In cultivating Indian corn, I am confident that "hilling" is a disadvantage to the crop. Of this I became fully convinced several years ago on contrasting its results with those of the opposing system, in a field belonging to a friend. Since then I have instituted a variety of experiments, and have found that the least surface is most eligible, and that in all modifications of soil and temperature, corn which is not "hilled up" is the most vigorous, less injuriously affected by drought, and produces more and sounder corn.
—*Germanstown Telegraph.*

NORTH DANVERS.—The one hundredth anniversary of the settlement of this town will be celebrated on the 16th of June next. A committee of twenty-five has charge of the arrangements, to carry out which the sum of \$500 has been appropriated by the town. JOHN W. PROCTOR, Esq., will deliver an address on the occasion. The citizens of the town have entered into the matter with spirit, and a good celebration may be expected.

Wisdom is not always grave, nor folly gay.

*For the New England Farmer.***THE WEATHER AND EMIGRATION.**

BY SILAS BROWN.

MESSRS. EDITORS:—There is no subject talked upon more, if so much, as the weather. I had a friend, somewhat sensitive in his feelings, who would frequently come in from out of doors and exclaim "the oldest man living never saw such weather before!" Whether that was true to the letter I cannot affirm. We are apt to forget or be unmindful of weather that has gone by, as well as "last year's clouds," but there is a mystery in regard to the vicissitudes of the weather which I never have seen satisfactorily explained by philosophers or astronomers.

What should cause the seasons to vary so much, is probably owing to some kind of change in the solar system which is beyond the science of astronomy to reveal to us. We have runs of forward seasons and runs of backward seasons, successions of cold seasons and hot seasons which have an influence over all our growing crops. A change took place soon after the great eclipse in 1806, which continued several years; the summer previous to that period had been excessively hot and dry, and after the eclipse they became cool and rainy, and the weather-wisdom attributed the change to the effects of the eclipse. At a few years later period the cold summers were accounted for by the spots in the sun, which furnished a subject of curiosity and speculation for all the wiseacres under solar influence; wonderful spots real or imaginary were seen enough to obstruct the greater part of his rays from reaching our cold planet and shedding his warming and invigorating influences upon tardy and reluctant vegetation. It is easy to ridicule things we do not understand; "but facts are stubborn things."

Deacon Seer came along one morning in the month of January, after several days of weather which tried men's physical feelings, if the feelings of the spiritual man were left unmolested; I inquired of the deacon what he thought of the weather, and what the result would probably be; the deacon's countenance expressed his anxious feelings, and said that the first day of Christmas stood for January, and so on each of the twelve days of Christmas represented the twelve months in the year in succession, and that whoever lived to see summer, had never seen the like before; the rye would all be destroyed by rust and mildew, and the corn cut off by frosts; and as for potatoes, there would not be enough for seed; said I, "deacon, how do you reckon in making out your prediction,—the twelve days of old Christmas or the twelve days of new style?" The deacon seemed somewhat in the way of obstacles, and in a quandary after a while concluded that the new style must have been an improvement upon the old, and of course those untoward days in new style might have been transferred from the old, and rule the months with a vengeance.

The deacon's philosophy in this case was about as rational as ours generally is about weather. Our predictions, far from infallible, consist mostly of the Yankee trait in guessing. Many have an idea that the planets do not influence our growing crops, but I believe their varying positions influence the weather, and the weather has a controlling influence upon all our growing vegetables. It is probable, in my mind, that the changing

position of the planets in the solar system directly or indirectly create the atmospheric disturbances and irregularities which so frequently take place and cause such variations in the weather; causes we know there must be for these changes from the effects we daily experience, and as astronomers have not arrived at a point of knowledge adequate to explain to us the true causes of these atmospheric phenomena, we have a right to conjecture and speculate upon the subject till we can be satisfied with a solution of the true cause; whether this event may take place, while other improvements are rapidly on the march, is still a problem. I have not much faith in the management of the moon over our terrestrial affairs, whether planting our potatoes at her change or full, enlarges or diminishes our crops; but unless the moon, at her phases, causes some decided change in the weather, I should very much doubt her juggling operations in making potatoes grow. By long observation, I have remarked that we have some kind of stormy weather at the change of the moon which may be owing to her combined attraction with the sun in causing high tides and charging the atmosphere with an uncommon degree of dampness. The weather, like an air balloon, has no conducting helm or keel like a ship, by which it can be guided, but seems entirely at the disposal of windy agencies to us unaccountable, though influenced by causes which produce their regular effects beyond our research.

The wise farmer will be prepared for the weather as it comes, and ready to embrace every favorable opportunity offered him to make regular go-ahead progress in all his branches of business. Sloth and Negligence are never prepared for any kind of weather; if the weather should prove favorable there is no preparation to take the advantage of the opportunity, but disorder and confusion reign triumphant about the premises; plows broken, and all kinds of utensils mislaid or unfit for use, and of course the opportunity was lost for taking the advantage of good weather; and neighbors Sloth and Negligence continuing in the rear, after wasting their time at unsuccessful fishing and gunning or at loafing with comrades like themselves, conclude that farming is the most unprofitable and worst business in the world, and the climate and weather are both intolerable, and that it is best for them to go to California.

About the time of the above conclusion, Messrs. Extravagance, Grab, Humbug, Ambition, Envy, Lovegold, Poorcalculation, and several others of like adventurous spirits, formed a company with a determination to emigrate to California, and by the influence of magnetism or some other agency which aroused the vital spark that was almost dormant in Sloth and Negligence, and raised the fever to such a height, that they by sales and mortgages of their remaining effects raised money enough to defray their expenses to California. This motley company being formed, they went aboard the good steamer *Enterprise* and soon landed at Chagres; here the novelty of the scene, heavy potatoes of down-trouble and the fragrance of the real Havana created such a glorious confusion in the naturally indolent craniums of Sloth and Negligence that they did not dream but their baggage was already in California; but mistakes have to be rectified sooner or later for the benefit of interested parties; these latter gentlemen, while

passing over the Isthmus, and after a length of time sufficient for their overtaken and fumigated brains to become filtrated, began to suspect that all was not right; the idea of their baggage, their all, was not such a trifle in that situation, away from home and friends, but that it aroused their feelings for once in their lives to take a kind of view at realities. Their baggage was left at the steamboat wharf, and what must be done? Sloth awakened to the error of his ways, began to meditate upon the better way of recovering his "goods and chattels," and he faced about with an energy which he had never felt before, and days passed before he recovered his forsaken treasure and reached Panama; on arriving there he found to his regret all the company gone, pursuing their voyage; but Negligence, who continued in a dreamy, undecided mood, waiting for his companion; after much delay and embarrassment they re-embarked and pursued their voyage to the land of gold, carrying the same organs and animal propensities attached to them in New England, in other words, "Pomp would go with them." S. B.

Wilmington, April, 1852.

SULPHUR—FRUIT—TICKS.

During the past several weeks the *Maine Farmer*, published at Augusta, has given very interesting reports of the proceedings of their Legislative Agricultural Meetings, which we have read with gratification. Among the speakers there has evidently been those of practical experience and careful observation.

In a discussion upon the subject of *Fruit Growing*, Mr. FOSTER, of Gardiner, said the preservation of fruit trees from the depredations of insects, was of great importance. A gentleman from Louisiana, had told him of a remedy which, if it accomplished the purpose, would be worth millions to the fruit growers of the United States. He had tried it for thirty years and had always been successful. Had raised good peaches when the crops of his neighbors had been destroyed by insects.

This remedy has been tried before, but with what results we do not know, and we give the remarks of Mr. Foster, hoping that new trials may be made, and the results made public. The subject is an interesting one and claims attention.

"The remedy, the gentleman said, first suggested itself to him from observing the effect which sulphur had when given to cows, when they returned from their ranges, as they frequently did in the Southern States, covered with the peculiar wood ticks which are found in the south. A dose of sulphur given to the cows at night, would, in a few hours, cause the ticks to fall off, entirely dead. Taking the hint from this, the gentleman said, he bored into his fruit trees with a bit, taking care to bore through the *alburnum*, or white wood, and into the incision thus made, he forced by means of a syringe, a quantity of sulphur, and then plugged up the hole with a plug made of white pine. He had effectually rid his trees of all destructive insects by this process, and had never known it to fail. His theory was, that the sulphur, combining with the acidulous sap of the tree, entered into its circulation. The insects were killed by feeding on

the tree where the sulphur had entered into its circulation. Mr. Foster said he could not say the remedy was worth anything—he had given it for what it was worth, and would say that the gentleman who informed him of it was a planter in Louisiana, of sufficient respectability to be appointed by the president as one of the visitors of the military academy. He, Mr. Foster, had mentioned the matter to Dr. Holmes, of the *Maine Farmer*, who doubted, because sulphur was not soluble in water. In regard to that, iron was not soluble in water, yet he had known a single nail, driven into an oak tree, to discolor the wood for a number of inches, both below and above the place where it was driven."

For the New England Farmer.

A STRING OF QUESTIONS.

MR. EDITOR:—A subscriber to the weekly *Farmer* wishes advice through its columns. I have fifteen or twenty acres of moist upland of a black loam or muck soil, which was never plowed, being somewhat knolly, and which formerly produced very heavy red top, but through bad management is rather run out. Now I wish to know the best and cheapest way to bring up this land to its wonted productiveness. As a top-dressing rotten manure is good; are ashes applied in the same way? also what compost and how prepared, to be applied as a top-dressing? When is the best time to cut red-top and grasses on moist land, early or late? I have three acres (has been under plow two years) of black loam, rather moist, which I intend to stock, and which is not sufficiently manured; now I wish to manure and stock it without taking off a crop, as it will exhaust the soil, wishing to have the ground in good heart when seeded to grass. What of this plan? to cart on yard manure in June, when the land is dry, and either harrow, (which is best, where the land is rather moist, to plow or harrow it in) harrow again in July, and stock the last of August by harrowing in the seed. Which is best, to sow grass seed in the spring with oats, or to plow the stubble in, and stock by the first of September? What kind of soil is best adapted to the raising of barley, and what the yield per acre? What kind of grass seeds are best for stocking pasture lands, and how many varieties would you sow at the same time? To fatten pigs with sour milk, which is the best, corn or rye meal? Excuse my ignorance; what kind of fruit is the Baldwin variety? Wish to farm it for profit, hence the necessity of farming it right.

Respectfully,

A YOUNG FARMER.

Bethel, Vt., March, 1852.

REMARKS.—Will some of our correspondents who have leisure, and who are impatient for opportunities of doing good in the noble cause, reply to the above interesting and important questions?

STOCK.—Particular attention is still needed by all the animals of the farm, but particularly the milch cows. There is an important change going on in the system; the appetite is not so good as in cold weather, and a little grain of any kind, if it be but a little that can be spared, will be of great advantage as the warm weather approaches.

IMPROVEMENT OF MEADOW AND SWAMP LANDS.

The vast extent of unproductive meadow lands everywhere to be found in the vallies of New England, awakens the inquiry what can be done for their redemption! From time to time, we have witnessed experiments for this purpose, more or less successful, but still, a large proportion of these lands remain comparatively valueless. That they are capable of being rendered as productive as any lands on the farms, has been too often demonstrated, by actual experiment, to admit of doubt. What is necessary to be done to secure this! In the *first place*, the superabundant water should be effectually removed and shut off from the land. Until this is done, no permanent benefit can be established. It matters not how deep may be the soil, or how rich its constituents, if surcharged with an excess of moisture, such moisture will even be fatal to vegetable products. None more so, than the cold water that comes in from the upland springs. In repeated instances have we known the labor of years to be lost, by a neglect of cutting off these cold springs. Whoever therefore would redeem a swamp, should take care that all supplies of water from the shore should be effectually cut off. If other ditches need to be made, let there be one main channel for the water, and other collaterals, until the soil is so consolidated that it can be tilled. Much more can be effected in this way, than by bringing on material from abroad, such as sand or gravel, though a mixture of this kind of material with the mud is often beneficial. But such covering will be found quite ineffectual, in a few years, if the water is not removed. Where the water is, the meadow and sour grasses will spring up—and it cannot be otherwise.

Much depends upon the characteristic of the mud in different meadows—these vary quite as much as the soils upon the upland adjoining. Some kinds of mud, we have known taken from the meadow and applied directly to the upland, with an effect upon the growing crops equal to that of a dressing of manure. But generally, such mud is made more effectual by being frozen before it is applied; and often it is beneficially used in the formation of composts.

Several farms, within our knowledge, have more than doubled their crops, within the last dozen years, by a judicious application of compost formed chiefly from the mud of swamps. Judging from the papers that have appeared, by the transactions of the several Agricultural Societies of the county, in no part is more attention paid to the reclaiming of meadow lands, than in the county of Essex. The experiments of Messrs. Bradley of Methuen, Marland of Andover, Newhall of Lynnfield, Brown of Saugus, Porter of Wenham, Kimball of Boxford, Ware of Marblehead, West of Haverhill, and King of Danvers, are full of instruction on this subject.

Notwithstanding much has been done by these gentlemen, and evidence conclusive given of what can be done by proper attention, still the proportion of what *has been reclaimed*, to what *remains to be so*, is so small, that the casual passer by might not be conscious that any improvements had been attempted. Many are deterred from engaging in this class of improvements, under the apprehension, that the expense incident thereto will be disproportionate to the benefits. Such need not be their apprehensions, if the facts related by the persons before named, are to be relied on. We particularly remember the meadow reclaimed by Mr. F. Brown, of Saugus, an account of which was published ten years since by that careful observer of facts, Mr. H. Colman, in which several acres of land of first quality were secured, over and above all incidental expenses. Not unlike this, is the recent experiment of Mr. Ware, of Marblehead, in which a worthless sunken morass, of about three acres, was in the space of two years converted into a field of English grass, permanent and beautiful as any other—worth at least, *two hundred dollars* an acre. The illustrations here given have been drawn chiefly from those fields that have come within our own personal observation. Others, equally pertinent, without doubt, can be found in other sections. If we have been so fortunate as to impress the owners of this class of lands with a sense of their duty to themselves and to the public, to endeavor to reclaim them, and thereby convert, what is now just cause of offence, exhaling *miasmatic effluvia* to the annoyance of all around, into fields of luxuriance and plenty, we shall have done a good service in the community. We know not how the interests of all could be better served.

RURAL LABOR.

We have observed Farmers and Mechanics in the prime of life, seemingly bowed to the earth with excessive toil, apparently almost worn out with hard and unremitted labor. Now we can hardly believe this is necessary to obtain the ordinary comforts of life; if it is, then the husbandman's avocation is indeed a hard lot. But is this hardship inevitable; is it not owing to circumstances within the limit of mitigation! Has want of economy anything to do with it; has intemperance or extravagance in any of your household anything to do with it!

These questions admit of answers; if in the affirmative, the remedy may yet be within your reach. If in the negative, then we will pursue the inquiry farther. Has unavoidable misfortune brought you the sad necessity of this endless toil! If so, then you deserve, and you have our sympathy. But is the strong desire to amass wealth the incentive to this extraordinary self-denial! Then, "What doth it profit a man to gain the whole world and lose his own soul."

But we have often observed that it is not the indolent or careless man, who exhibits these unmistakable marks of premature old age. But it is

the middling class of independent Farmers and Mechanics, who possess, as a general thing, more than a competency. Now what is the object for which they expose themselves to all the inclemencies of the season, and toil on without intermission, through rain and snow, cold and heat, night and day, until they are stiff and useless with infirmities, racked with rheumatism, or struck down with disease. Is it necessary to sustain your existence? then it is a duty to go to the last stretch of human endurance.

Is it necessary to the existence of those who are dearer to you than life? Then natural affection will prompt you to discharge an imperative duty, to the full extent of your ability. Is it to provide things necessary and convenient for your household, that you are thus early sacrificing health and happiness and even life itself? Then it is a duty up to the point of necessity, and no further. Is it for the purpose of educating your children, and fitting them for usefulness in life? Then it is truly laudable, then it may be a question how far your duty extends. Is it for the purpose of amassing superfluous wealth, that you may leave an inheritance for your offspring? Then it is sordid and criminal, and such a wretched suicide is beyond the circle of our sympathy.

This last mentioned class is the one we arraign, and they must plead guilty. We believe that a temperate, honest and industrious man is able, with ordinary health, to secure the necessities of life for himself and family in this country, far within the utmost stretch of human endurance, and even *without* that superior *management* which makes many rich with little effort. And that all may have not only sufficient time for rest and recreation, but also time for mental and moral improvement.—*Green Mountain Farmer.*

For the New England Farmer.

RECIPES.

CORNS can be cured by paring and wetting them with muriatic acid; it will cause no pain, unless you pare to the quick, and never fails to cure.—Try it. (a.)

SWELLED UDDER.—Boil the bark of bittersweet, —the bark of the root is best,—in water to get the strength; strain and simmer it away in fresh butter to an ointment; bottle it, and it will keep for years. This ointment is excellent for cows' bags that are swelled, and will heal a wound on a horse. Every farmer should keep it.

BEDBUG POISON is the best to kill bedbugs, and leaves no scent; it is made by dissolving one ounce of corrosive sublimate in one pint of alcohol; apply the mixture with a feather to the joints of the bedsteads. Label the bottle to prevent mistakes.

I built a corn-house in 1842 on a new plan. The usual way with us has been to build corn-houses on wood posts, with a flat stone under the sill, or on stone posts, with a tin pan bottom side up under the sills to keep the mice from running up the posts; but the mice in most cases get into them. I framed the sills into the posts two and one-half feet from their end, and cased the posts, filling the wane corners of the posts, to keep the mice from running up, and put a sheet of tin round them ten inches wide under the sills; this keeps the mice and red and striped squirrels out, but the grey squirrel jumps over. My corn-house is 15 by 18

feet, 10 feet from sill to plate; the beams are framed into the posts two feet below the plates, making a good chamber for grain. It is boarded on the sides and one end with strips three inches wide and three-eighths of an inch apart. The cribs are two feet wide, laid up with strips on the inside, and will hold three hundred and fifty or four hundred bushels of ears. It is built with six posts, braced from the top of the sills to the posts and under the beams and plates; the wind does not move it. The posts should stand on a stone with a channel cut round them to keep the water from running under and rotting the posts. It should not stand near a fence, nor have steps for the mice to run upon. The tin is quite an ornament to the house. C. M.

Montpelier, Vt.

REMARKS.—(a.) We have clear convictions on one point, viz.: that nothing is made in vain. But we had forgotten, when we spoke of *tobacco* recently, that it was a *sovereign remedy* for *corns*; at least, a lady told us so many years ago, and she the wife of a Governor, too, and she ought to know, of course! Take a fat quid, madam, (for ladies unfortunately have corns,) if your husband happens to be a tobacco chewer, and bind it upon the aggrieved part, renew it every other day, and the cure will be certain. But prevention is better than cure. The recipe is simple,—wear suitable boots or shoes.

THE FARMER'S GUIDE

To Scientific and Practical Agriculture. Detailing the labors of the Farmer, in all their variety, and adapting them to the seasons of the year, as they successively occur. By HENRY STEPHENS. Assisted by JOHN P. NORTON, Professor of Scientific Agriculture in Yale College. LEONARD SCOTT & Co., Publishers, N. Y.

This is a work which, in itself, would compose a pretty good farmer's library. It begins with describing the best existing methods for acquiring a thorough knowledge of practical husbandry; speaks of the difficulties the beginner has to encounter in learning, and the means of overcoming them. It then takes up and discusses, in the most systematic manner, all the various operations of the farm—the forests, fields, meadows, swamps and pasture; the barns, stables, yards and dairy. Also, all that can be said in books of the gathering, preparation and application of manures. Treats of cattle, horses, sheep and swine, their growth, management, profits and losses, diseases, remedies and various breeds; of poultry in its every relation. In speaking of plowing, for instance, it does not stop with the mere declaration that *deep plowing* is beneficial, but sustains that declaration, by such plain and practical teachings as will satisfy the most captious of the ability of the writer to teach. The *plowman's* duties are also distinctly defined, and all the operations of that art illustrated by appropriate engravings. Each branch of farm husbandry is in this manner minutely discussed, explained, and its importance enforced.

Beside this, the two large, royal octavo volumes

comprising 1600 pages, are illustrated by about 600 engravings on wood, of horses, cattle, sheep, swine, poultry, insects and implements. Fourteen of these illustrations occupy a broadside of a page, each, and eight of them are upon steel.

Now with all this mass of information, and the immense labor which it must have cost to prepare it, the question arose with us, as it will with the reader, was the writer really competent to teach, or was the creation of these volumes the means of gratifying a desire to appear before the public as an author, and that itch for writing which the latinists call *cacoethes scribendi*? In taking up the work, this question was the first one upon which we proceeded to satisfy ourselves. The author informs us in his preface, that after receiving what is commonly called a liberal education, he boarded himself with a farmer possessing 600 acres, and there he labored with his own hands at every species of work which the plowman, the field-worker, the shepherd, the steward, the cattle-man, the dairy-man and poultry tender must perform. He then travelled through most of the countries of Europe, and upon his return to England, purchased a farm and operated upon it on his own account. In our opinion, he is entitled to the fullest confidence, not only as a practical, but a scientific teacher.

In addition to these free commendations, we think the work possesses other merits, and without which it would have small value to us. It has a full and expressive table of contents, and a minute and carefully prepared index. The text is divided into sections and numbered, and the index refers to them; so that there is no difficulty in turning at once to any particular subject. The work is also enriched by "Appendices to the Seasons," by Prof. Noxon, of Yale College.

We shall have occasion for frequent reference to this work in future investigations, and have so much extended our notice as to leave no space for the extracts which we had designed to present.

For the New England Farmer.

THE LARGEST CALF YET.

Mr. Ralph P. Gilbert, of Gilead, Tolland Co., Ct., has a finely formed, spotted red and white, (nearly three-fourths white,) bull calf, which came on Sunday, April 18. On the Monday morning succeeding, it weighed, in presence of several witnesses, one hundred and eleven pounds.

Assuming that Mr. Dudley's calf gained the same *per day* during the first four days, as during the subsequent six weeks, its weight at the first would have been one hundred and seven and one-half pounds, showing a balance in favor of the Gilead-ite of three and one-half pounds.

Mr. Gilbert's calf is not an Ayrshire, nor a Devonshire, but a *native*, and is acknowledged by all who have seen him to be the *finest* and largest calf of his age that stands on four legs anywhere in this region. Yours truly,
Gilead, April 28, 1852.

A SUBSCRIBER.

For the New England Farmer.

WHITE BEANS VS. COLORED.

Why is it that no kinds of beans sell as well in market as white? I cultivate and raise a kind of bean that is of a light orange color, which is far better for cooking, and makes a more palatable dish than any white beans I ever saw. And all our friends who chance to sit at our table and partake of them as they come warm from the oven, agree with me, and say they are very good.

Yet no beans are inquired for in the market but white. The bean crop is one of the most profitable the farmer can now raise for the market, compared to the expense of cultivation. My manner of raising is to plant them among the corn, and I cannot discover that they injure the crop of corn in the least. They should be planted in the rows of corn, quite near the hill, and on the south side of the hill of corn. If planted in this manner, they are not in the way of the hoe, and the corn does not shade the beans.

INSLEY DOW.

East Corinth, Vt., April, 1852.

REMARKS.—Because it is the *fashion*, friend Dow. The horticultural bean, so called, a nearly round, speckled bean, is far better, cooked any way, than any white bean we ever tasted. And this is the opinion of nearly all who try them. They are most excellent before ripening to eat with green corn, or as a side dish, and are not surpassed by any other when baked. But they are dark colored, and that makes them unfashionable. We have passed some twelve years of our life among the "darkies," without having contracted such a prejudice to the "ebony line" as to make us reject a good bean because of its complexion. If people will make trial of some other kinds of beans beside the white, we think they will soon agree with us in taste.

For the New England Farmer.

STONE WALL.

BY SAMUEL FLINT, JR.

MR. EDITOR:—Farmers and scientific men have made extensive observations to discover the cause of the potato rot. This is well; but there are causes for other misfortunes, of less importance than the loss of potatoes, and consequently, demand less attention. There is nothing, as we travel in New England, more commonly seen than gaps in the wall; especially in the spring of the year. As there is a cause for everything, would it not be well for our farmers to inquire what throws down their wall? Every body will lay it to Jack Frost, of course. He is a busy mischief-maker no doubt, and very much a "leveller;" but we often see a piece of wall that defies his power, and stands erect through a long course of years. Stones laid up on a naked ledge, if they are laid so as to stand till the builder is out of sight, seldom ever fall. So on dry sandy land, if the wall is tolerably well built, it generally stands! Why? Because the *foundation stones retain their places*. The principal, and I do not know but the only cause of gaps in the wall, is a want of stability in the bottom stones.

It was formerly customary, in building wall, to lay at the bottom two "large cobbles," as they

were called, and across these a "binder." Such wall, no matter what the superstructure may be, if laid in an easterly and westerly direction, on moist land having a southern exposure, is sure to fall down; because the frost, coming first from the south side of the wall, the "cobble" on this side settle first, and generally slip a little down the hill, carrying the "binders" with them; and this process being repeated for a few years, the binding stones slip off from the "cobble" on the upper side of the wall, and resting only on the lower stone, it usually happens that the top of the wall is thrown off on the northerly side. To prevent this, some recommend digging a ditch of sufficient width for the foundation, fill it with small stones, and build on them. I have never seen a wall of this kind, and do not know how it stands. Where there is an abundance of small stones, and the ditch would answer at the same time for a useful drain, I think it would do well. My farm abounds in large stones. I draw these, sometimes as large as two yoke of oxen can move down hill, and always of sufficient length for a good foundation, and placing them along in the line of my wall, build on them. The ground should be levelled when necessary, and care should be taken that one end of the foundation does not rest on a stone, while the other lies on the earth; for one end resting on a stone already fast in the earth, the other end will settle; and thus make a breach in the wall. The face of the wall, on the up hill side, should be nearly perpendicular; thus bringing the bearing on that side. I never have had any trouble with wall constructed in this manner.

Yours, &c.

S. F.

Lyme, N. H.

For the New England Farmer.

AGRICULTURAL MUSEUM.

[The following remarks are in reply to a letter from an experienced farmer making suggestions upon various subjects.]

Reflecting upon the many valuable suggestions contained in your note of the 13th, it occurred, that I had entirely omitted to notice the suggestion of forming an Agricultural Museum, and bringing in that *plow of much service*, with many other things of like character. The thought is a good one, that must not be overlooked. Suppose, for instance, that the several models of plows, from the time Jefferson and Pickering applied their minds to the formation of the mould-board, up to the time when the Michigan sod and subsoil plow came into being, could be arranged in order, with an appropriate explanatory index, where could a more practical lesson be studied? Let young Stockwell, and other young men like him, have free access to such models, and it would not be long before other improvements would be matured, that have never yet been imagined. I speak of the plow, by way of illustration, but the same remark may be extended to every other implement, the use of which is found desirable. Connected with this, there should be a geological department, in which should be brought together from every part of the earth, specimens of the rocks and soil, systematically arranged. Let this be so, and some one of easy manners and ready words to explain them, and a visit to such a collection would be more useful to the young farmer than any other collection that could be made. I was deeply impressed with this consideration, during an hour that I spent with

President Hitchcock, the last autumn, among the curiosities that he has gathered. He is decidedly a *practical man*—although he may not be looked upon by farmers as such. Men may be practical, who do something else beside handling the *fork* and the *plow*; there is a practice of the mind, equally valuable with that of the hands, the proper union of which will be found the perfection of operations.

It will be remembered, by those who were present at the early plowing matches in Brighton, that many of the first premiums were taken by the plows and teams of Worcester county. "*That plow of much service*," before mentioned, is understood to be now in being, and in the hand of a gentleman, who will be pleased to place it in a museum, such as we have contemplated. How can our new State department better commence operations than by laying the foundation for such a museum?

VERBUM SAPIENTI.

For the New England Farmer.

A LARGER CALF, STILL.

MR. EDITOR:—In your valuable *New England Farmer* of last month, in which you publish the account of a large calf owned by Mr. B. F. Dudley, of Milton, which, at the age of six weeks, weighed 222 pounds, you remark that people in that neighborhood consider this calf an extraordinary specimen of his kind. You wish, if any of your readers should know of any thing surpassing it, they would mention its whereabouts.

Happening to pass part of the present week with my friend, E. Murdock, Jr., Esq., of Winchendon, Worcester Co., I was shown a calf owned by him, and it was weighed while I was at his house, and its weight was 240 pounds the day the calf was six weeks old.

I was also informed by my friend Murdock, that the calf had not taken all the milk which its mother gave, any one day since it was dropped.

Roxbury, May 1, 1852.

A SUBSCRIBER.

SPORTING.

Mr. John Partridge, of this town, killed on Tuesday, of this week, seventeen crows at two shots. A few days before he killed fifteen at two shots. Mr. P. informs us that two or three years since he procured some carrion and distributed it in a straight line at intervals of a few feet, this attracted the crows in great numbers. He succeeded, in one day, with six shots of an old musket, in capturing 76 crows, at one time killing twenty. The above facts are reliable.—*Culturist and Gazette*.

REMARKS.—Mr. Partridge had better have blasted rocks with his powder, and made an aqueduct pipe of his old gun, than shot the crows with them. In the "dark ages," some years ago, New Hampshire, and we believe Massachusetts was equally enlightened, offered a bounty on *dead* crows; but after paying out some thousands of dollars, found out that they had offered a premium for the scalps of some of their best friends! and very wisely repealed the law.

"We often mistake our friends for foes."

Industry and perseverance merit success.

ESSEX COUNTY TRANSACTIONS.

The pleasure was ours of attending the last annual exhibition of the Essex county Agricultural Society, at Salem in September last. Since that time its ample volume of Transactions has been published, and through the kind attention of its President, the Hon. JOHN W. PROCTOR, we have received copies. This society has long been in vigorous existence, and we have no doubt has been the means of increasing the productive powers of the soil of that county some hundreds of thousands of dollars in value. It has been favored through a long series of years with men of such intelligence and earnestness of purpose, and at the same time impressed with such a sense of the importance of a more thorough cultivation in order to derive a remunerating profit and meet the demands of increasing trade and population, that its prosperity and usefulness have been constantly increasing. With such men as COLMAN, KING, NEW-HALL, PICKERING, and many others in that ancient county, who have ever been interested in the cultivation of the soil, any of our societies may increase their fruits an hundred fold. Mr. PROCTOR, we believe, has been the President of this society for more than thirty years. Such long-repeated confidence, and annual approbation of services would, to us, afford a higher gratification than any political honor which could be conferred,—indeed, it almost negatives the scripture declaration that “a prophet is not without honor save in his own country.” Mr. PROCTOR has it not only every where else, but in his own county.

Mr. DODGE, of Hamilton, is the never-tiring Secretary of the society, and we have no doubt that much of its success may be attributed to his indefatigable industry in gathering and preparing the reports for publication.

The operations of a society may be very extensive, and of a high character, but if they are not reported so that the people at large may come at them, they can be of but little use to any but those making the experiments themselves. It is necessary that full and thorough reports, but in a clear and concise style, should be made. In the Essex society this seems to be fully appreciated. One such report as that made by Mr. Wm. F. PORTER, of Bradford, must do much to settle the question as to the profits of farming, and affords strong encouragement to those who are doubting. His neighbors admitted that he had a good farm, but doubted whether he could obtain a living from it. The farm, with new buildings erected, stock tools, &c., cost about seventeen thousand dollars. Looking at the credits to the farm last year, the reader will perceive that the interest on that investment was nearly *twelve per cent.*, an interest that ought to satisfy any reasonable man in any business.

But the people of Essex county have accom-

plished a great deal in the improvement of their meadow and swamp lands, until they have not only satisfied themselves, but all who look upon them, that they may be made the most productive lands we have. We have been looking at some of the former volumes of the Transactions, as well as the last, with reference to the improvements made on meadow and swamp lands; but as our remarks are somewhat extended, have placed what we had to say particularly on that subject in another column.

DEEP PLOWING.

As the season is approaching when our farmer friends will start their plows, we deem the following article, which we find in the *German town Telegraph*, to the point at the present time:—

A farmer in this vicinity whilst plowing last fall, was asked by a neighbor who, although he had a large farm, could scarcely support his family off it, why he plowed so deep?

“Because, neighbor,” he replied, “I plowed the same way last year, and the year before, and I found I plowed a great deal of gold!”

“Gold!” exclaimed the amazed neighbor, “why, how much did you plow up?”

“Well, some hundreds of dollars a year—and I did it in this way; my crops were twice as large where I plowed as I now do, in the same fields where I formerly plowed only to half the depth, and they take less manure too.”

“I don’t believe a word of it,” said the neighbor, disappointed in the gold digging. “If that is the way you plow up gold, I am afraid you will never set the river on fire. I go for the good old way, and find it the best. There is little to learn in farming which those before us did not know.”

“Well, neighbor, you may do as you like, but I have tried both ways, and I am more than satisfied with the result. Indeed, by strictly persevering in it and other improvements, I shall nearly or quite double my profits, and all this excess I consider just so much gold plowed up in my fields.”

“Ah,” continued the neighbor, “I see you are from your notions a book farmer, and belong to an agricultural society; but you’ll find it won’t pay in the long run, I think.”

“There’s where you are in error, my friend; I am no book farmer—I belong to no agricultural society, but I mean to join one at the earliest opportunity.”

PREVENTION OF GUM ON PEACH TREES.—A practical gardener informs us that if the earth is removed from the roots of the peach trees affected with gum, to a distance of one foot immediately around the trunk, and finely powdered charcoal applied to them the thickness of an inch, that it will effectually check the flow of gum.

THE CHERRY SLUG.—This larva, which eats the pulpy part of the leaf of the cherry, and sometimes of other trees, is most effectually routed by a sprinkling of *lime*. Air-slacked lime, applied in the dew of the morning, accomplishes the desired purpose. Dry, water-slacked lime, taken fresh, is still better, being more caustic.—*Exchange*.

For the New England Farmer.

MILKING—COW MILKERS, &C.

BY L. DURAND.

MR. EDITOR:—The keeping of dairy cows, milking, &c., is what is known and practiced by farmers in all countries more or less. In this country I believe that the largest part of milking is done by men and boys, which, perhaps, is as it should be. However, I think that the "girls and women" on the farm should all know how to milk, and some agricultural writers contend, that all the milking should be done by the females, a matter which I do not believe in altogether. As in case of stormy weather, unruly cows, &c., most of the milking should be done by the men (and done, too, without grumbling,) after a day's work. I have been brought up to this business from boyhood, and well remember when first I began to learn that it would be a nice thing to get so as to milk well. But after I had got well learnt and found that I had got to make a business of it, very soon we began to "sing quite a different song." It is my impression now, that throughout England, Scotland and Ireland, most of all the milking is done by females. This, perhaps, comes from custom, but many of the farmers contend that women have more patience than men, with cows, and so of course get more milk.

My experience in the art of milking has led me to the conclusion that among the great mass of milkers only a few are in every respect good milkers. It is astonishing to see the difference in the amount of milk which a good milker will obtain from a cow, and a poor and bad milker. When an indifferent milker sits down to a cow, he is so slow and tedious in drawing the milk that the cow gets out of all manner of patience, and before the job is done, very often she kicks over the pail, and milker too, to pay him for his job. Then this slow, tedious milking proves in a short time to lessen the amount of milk, and finally to dry up the cows. A cow should be milked in the shortest possible time that the milker can take to draw the milk from the bag. The milker should not stop to talk, or tell stories with his fellow-milker in the meantime, but should continue to squeeze till the milk is all drawn from the bag. My father, who was a good milker, always drew all the milk with the thumb and fore finger. But very few milkers, however, can milk in this way; they more generally press the teats with the whole hand and finish off by stripping with the thumb and finger. In case of young heifers with very short teats they then must be milked in this way by stripping.

Something like a year ago, I saw for the first time "Knapp's Patent Cow Milkers," advertised as being a great improvement in milking, both in saving time and labor. The idea struck me at the time as being of great value to large dairymen if the "milkers" could be made to answer the purpose of drawing the milk from the cow's bag in a short time and getting as much milk as could be got by the hand. But having never seen the "milker" nor never having seen any one who has seen them tried by experiment, I could not say as to their value. However, your friend King, of the *Journal*, condemns them at once, but whether he does so by practical experience or by common consent as another "humbug exploded," he does not see fit to inform us. Neither should your correspondent, B. B. French, condemn them be-

cause that his "robin bone leg milkers" did not do good service thirty years ago. This is an age of improvement, probably in "cow milkers" as well as in everything else, and improvements never go backward. If the "cow milkers" will draw the milk clean from the cow's bag in half the time or less than can be done by hand, and that without pain to the cow, they should be adopted at once by all farmers and dairymen who keep over four cows. The time and labor saved by the use of these milkers, to farmers who keep ten, fifteen, twenty or thirty cows, in milking, would be enough to buy an extra cow or pay for the half of an extra hired laborer on the farm. I go in decidedly for all improvements in agriculture, whether it is in cow milking or corn hoeing. Just test the question by actual experiment and without prejudice, and then if it proves valuable, adopt it; if not, then cast it aside. Of all inventions ever yet contrived none is quite equal to the human hand, as is very well known. And yet, as perfect as is this machine, it has been found that hand labor alone is altogether too slow a process to carry on the works of art. So labor-saving machines in all kinds of business have been set to work, which perform the labor of so many thousands of human hands, all which go to cheapen the necessities and luxuries of life. Were it not for these improvements society could not progress, the improving world would come to a stand still, or go back to the dark ages.

But to return to "milking;" and that there is a good deal of art in this business, let any "green hand" take hold of the cow's teats and he will find that instead of squeezing out the milk into the pail he squeezes it up into the bag. In fact, it requires a good deal of practice to become an expert milker. Another thing is, let every milker provide himself with a good "stool" to set on and then with kind nature and gentle treatment to the cow he may succeed. Yours truly, L. D.

Derby, Ct., April 21, 1852.

INDIAN CORN.—Indian corn contains about sixty per cent. of starch, nearly the same as oats. The proportion of oil and gum is large, about ten per cent.; this explains the fattening properties of indian meal, so well known to practical men. There is besides these a good portion of sugar. The nitrogenous substances are also considerable in quantity, some twelve to sixteen per cent.

Sweet corn differs from all other varieties, containing only about eighteen per cent. of starch. The amount of sugar is, of course, very large, and the nitrogenous substance amounts to the very large proportion of twenty per cent.; of gum from thirteen to fourteen; and of oil, to about eleven. This, from the above results, is one of the most nourishing crops known. If it can be made to yield as much per acre as the harder varieties, it is well worth a trial on a large scale.—*Working Farmer*.

HOW TO CUT ASPARAGUS.—In passing through our markets in asparagus time, we find immense displays of that article, which is just about as fit for eating as would be rolls of hedgehog quills boiled. Nevertheless it looks beautiful—so white and clear. The writer of this sent a small quantity to market last season, but found great difficulty in disposing of it. The stems were absolutely green! But

after having tried it there was a clamorous demand for "more" like it. Cut your asparagus even with the surface of the ground. The white portions cannot be eaten—why should the trouble be had of boiling and buttering them? When the stems have had a sufficient exposure to the air to become green, they will cook tender; but they should not be allowed to grow too long—six inches or so is long enough.—*Prairie Farmer.*

THE LESSON OF A PLANT.

The humblest flower that blooms in the valley contains secrets and mysteries which all the philosophers on earth could not understand or explain, were they to devote a century to its study. There is nothing that man ever made, which may not be understood by any one of ordinary powers of mind, after a little study. The most curious combinations of machinery become very simple, and their operations are all perfectly comprehended, after we have looked into them awhile. But it is not so with the works of God. Take, for instance, this little flower. You know its name, and the genus to which it belongs. You can tell where it grew, and what kind of seed it sprang from, and what kind of soil and location it loves. You know its properties, and how long it was in coming to maturity, and how long it remains in blossom. You may even subject it to the microscope, and to chemical analysis, and be able to name its essential elements, and method of structure. But you cannot push your investigations much farther. You cannot explain *how* these bright and beautiful tints, these delicate and regularly-shaped leaves, and this sweet fragrance, grew out of a handful of common earth. You cannot tell why the stalk is of one color, the leaves of another, and the flowers, perhaps, pencilled and shaded with beautifully varied hues. You cannot explain those curious instincts of the plant, which are displayed in various degrees in different species, and which sometimes almost incline us to the belief that consciousness and intelligence are not restricted to the animal world.

But although we may never be able perfectly to understand the mysteries which are wrapped up in this little flower, we may derive important lessons of wisdom from it. If we will examine it with care and candor, it will teach us something about the greatness, the goodness and the perfection of its Creator, which will be of great benefit to us. An incident in the life of the Count de Charney affords a happy illustration in point. This French nobleman was possessed of education and fortune, but unfortunately was deficient in moral principle. He was fond of reasoning, but he confined himself to a "vicious circle" of argument, beginning in prejudice and unbelief, and ending in doubt and skepticism. Having become involved in a secret political movement in 1804, which was discovered by the police, he was confined in the fortress of

Fenestrelle. While pacing the little court-yard connected with his cell, one spring morning, he espied a little blade of vegetation springing up between two of the stones, which had scarcely yet escaped from the seed. It at once became an object of attention to the lonely man, and each day, as he witnessed its growth, and studied out the ingenious contrivances provided by nature for its protection from injury, the interest with which he regarded it increased. His hours of exercise were spent almost entirely by its side, watching its growth, and studying its changes; and often when confined in his cell, he continued to gaze on it, through the window. The result was, his pride was humbled, his skeptical notions vanished, and new and before unknown emotions found a place in his breast. It became his instructor in wisdom, his solace in imprisonment, and finally was the means of procuring his release from confinement by order of Napoleon, through a curious train of circumstances too extended to notice here. The original narrative of Count de Charney and his prison flower, written in French, has enjoyed great popularity, and is considered a valuable auxiliary in the cause of religion and morals, as, from its style, it influences minds which would turn away from formal treatises of natural theology. And thus this little chance-flower has been the means of pouring truth and light into many minds, in addition to the blessings it conferred on the poor prisoner of Fenestrelle.

It is related of the Rev. John Thorpe, an English clergyman, that after he had preached for about two years, he was greatly harassed with atheistical doubts, which continued to distress his mind for several months. One day, while passing through a wood, he was surveying his hand, when a leaf happened to fall into it. A sudden impulse moved him to examine the leaf, and in holding it between his eye and the sun, and reflecting upon its exquisitely curious and wonderful formation, he was led into a new train of thought, and received such a conviction of the existence and ineffable perfection of God, that his doubts and distress were removed at once; and he prosecuted his journey, rejoicing in the Creator, and admiring him in every object that presented itself to his view.

Paley considers that the evidences of creative wisdom and design are not so numerous in plants as in animals. This may be true, but there are certainly more evidences of a wise Creator in the vegetable world than most men imagine. Our familiarity from childhood with the thousand strange and beautiful operations of nature, too often prevents our seeing or appreciating the lesson they would teach. If we will but listen, we shall never fail to hear voices in the woods and among the flowers, and wherever there is a living and growing thing, uniting in the great hymn of nature,

"The hand that made us is divine."

For the New England Farmer.

A FEW WORDS ON GRAPE CULTURE.

MR. BROWN:—A few years ago there was an Isabella grape fever, and almost every family in our villages had a vine or more on their buildings; some erected trellises for them to grow upon, which made a fine ornament. Now they generally look as if they wanted the doctor. Many of them seem past recovery. In 1850, the fruit was cut off in this county by the frost, and many vines injured in autumn. My vines were defoliated by the first of Sept. About the 15th of August the under side of the leaves became red; they appeared to be eaten by some minute insect, and finally withered and fell, leaving the fruit hanging worthless. The next spring, 1851, I found but one plant, in a lot of 400, that had any life in its roots. The roots were black and rotten; these were one and two years old. Some plants from 5 to 7 years growth shared the same fate; only some 6 or 8 out of 80 plants pushed a few feeble shoots.

What shall we grow? Shall it be the wild, or fox grape (so called) as some have recommended! To me the greatest difficulty appears to be its unproductiveness, it having but few berries on a bunch, and those falling off by being slightly jarred; even a high wind will shake them off as fast as they ripen, especially after a slight frost.

As a source of profit, they are worthless, for they cannot be sold in market for enough to pay the gathering, unless the buyer thinks they are Isabellas.

I find Isabellas grown here, are not the Isabella's grown in the vicinity of New York. I have eaten fruit that was fruit, from a vine growing in Brooklyn, L. I. It was called the Isabella. It commenced ripening there by the 15th of August.

An extensive grape grower in the vicinity of Brooklyn, who has eleven acres devoted to the grape, paid \$15, and trimmed the vines for the cuttings for his vineyard. He considered it the best grape he was acquainted with. Our Isabellas are hardly an apology. His vines are trained to a wire trellis, his posts are locust and chestnut, with the wire drawn horizontally through them. May not the Sweetwater take the place of the Isabella? Gen. Newhall, of Lynnfield, has a variety called the Sweetwater. I think he procured the plant or seed of a gentleman from the Mediterranean. It usually ripens before frost comes; the fruit is sweet, with little or no pulp, transparent, pale green. It sells readily at from 20 to 35 cts. per lb. As it must be protected in winter, I would suggest a mode of culture. It is not so rampant a grower as the Isabella, which I think is in its favor for training. Set the plants on the south or southwest of some building or fence, about two feet off, set them three feet apart, in the row, and train each plant to a separate post.

Prepare the post in this manner:—Set a hard wood post in the ground, leaving about one foot above the ground; prepare a pine scantling eight feet long, two inches thick, four inches wide at the lower end, two inches wide at the top. Saw out a piece in the post set in the ground, bore two holes through the post and scantling, and put pins in them so that by taking out the upper pin, the scantling will lay on the ground, the lower pin acting as a hinge. Set the post so that the scantlings will all lay one way, laying over each other.

In the autumn, take out the upper pin and let them fall, with the vines attached as they grew. Take some boards, and lay them edgewise on each side of the vines, which makes a sort of box, and fill it with earth. Would not such a mode of culture be more ornamental, with ten or a dozen plants in front of a house, than the Isabella, with its naked and crooked trunk reaching to the top of the house, with the fruit around the attic windows, and that all mildewed. Some object to the Isabella on account of the injury to the house, which this mode will obviate. They answer for shade when shade is wanted. In winter they are not an unsightly thing, because they are out of sight. N.

Danvers.

REMARKS.—The Yankee shines out pre-eminently in that suggestion. We have vines on the south side of a ledge where the snow accumulates to such a depth as to break vines and trellises every winter. The suggestion seems a good one.

For the New England Farmer.

CORN FOR GREEN FEED.

DEAR SIR:—I wish to inquire through your paper what kind of corn you think it the most profitable to plant to be cut up, while green, for fodder. I am aware the southern corn yields more in bulk than the sweet corn, and I would like to know if the latter makes up in *quality* what it lacks in *quantity*, so as to render it as profitable to raise for this purpose as the former. By answering these inquiries you will oblige,

Yours, &c., DANIEL BUXTON, JR.

REMARKS.—We always sow the yellow flat corn to cut up as green fodder for cows, and have no experience with any other. Some of our readers have undoubtedly made experiments with corn for this purpose, and will be pleased to communicate their opinions. The *Working Farmer* recommends what it calls Stowell's Evergreen Corn for this purpose, and states that "the stalks are nearly as sweet as those of the sugar-cane, and that double the quantity can be grown to the acre, to that resulting from the ordinary sweet corn." Corn as green fodder is an important crop; it gives a large yield, is very nutritious and palatable to the animal, all which make it very desirable that we should know what are the best kinds to use.

DO NOT WORK FOR NOTHING.—"We have long contended, and religiously believe, that the cultivators of American soil perform more unnecessary work every year to obtain their crops than the aggregate labor of all other classes combined. This prodigious loss of labor and capital can never be prevented until the laws of nature that govern the fruitfulness of the earth and the rewards of farm labor, are *studied, understood and obeyed.*" So says Dr. Lee. Patent Office Report, 1850-51, page 63.

FREEZING OF VEGETABLES.—Contrary to general opinion, freezing is not necessarily destructive of life in vegetables. At Charles Island, in Hudson's Bay, according to Captain James, the trees had

to be thawed by fire before they could be cut down, and there is no doubt that the roots are as well frozen as the stem since vegetation prospers in Siberia, where the following observations have been made:—A well was dug 400 feet deep, and the temperature at 50 feet was 18° Fahr., at 77 feet 19°, at 119 feet 22°, at 300 feet 28°, at 382 feet 31°. At this place the soil is frozen to the depth of 400 feet; the cold reaches 58° below zero, and the mean temperature of the two winter months is 40° below zero. During the 128 days during which there is no frost, the strata of eternal ice are never thawed to a greater depth than 3 feet.—*N. Y. Tribune.*

BOOK NOTICES.

RURAL ARCHITECTURE. By LEWIS F. ALLEN.—This is another of SAXTON'S admirable books for the farmer. The other professions have long had their publishers, and the press has been enlisted to disseminate the doctrines which their books have taught. The farmer now has *his publisher* of works directly pertaining to his profession, and they are issued in a style becoming the beauty and importance of the subject of which they treat.

The volume before us contains a description of farm houses, cottages, and out-buildings, comprising wood houses, workshops, tool houses, carriage and wagon houses, stable, smoke and ash houses, ice houses, bee and poultry houses, barns and sheds for cattle, together with the flower, fruit and vegetable garden, and the best method of conducting water into cattle-yards and houses. These matters are all illustrated with handsome engravings, and the book is printed on large clear type and good paper. Now in one or another of the subjects discussed in this book there is probably not a farmer in the land but will find some aid. He has water to introduce into his house or barn, something to build or something to alter. In this book he may find such hints as will suit his case, for it was made on purpose for him. "We insist," with the author, Mr. Allen, "that agriculture, in its true and extended sense, is as much a profession as any other pursuit whatever."

We give a few extracts from the admirable preface, believing that in no other way can we better fill half a column. So we take, first, the following just remarks upon agriculture as an employment:—

"It is an opinion far too prevalent among those engaged in the more active occupations of our people,—fortified indeed, in such opinion, by the too frequent example of the farmer himself—that everything connected with agriculture and agricultural life is of a rustic and uncouth character; that it is a profession in which ignorance, as they understand the term, is entirely consistent, and one with which no aspirations of a high or an elevated character should, or at least need be connected. It is a reflection upon the integrity of the great agricultural interest of the country, that

any such opinion should prevail; and discreditable to that interest, that its condition or example should for a moment justify, or even tolerate it.

"Why should a farmer, because he is a farmer, only occupy an uncouth, outlandish house, any more than a professional man, a merchant, or a mechanic? Is it because he himself is so uncouth and outlandish in his thoughts and manners, that he deserves no better? Is it because his occupation is degrading, his intellect ignorant, his position in life low, and his associations debasing? Surely not. Yet in many of the plans and designs got up for his accommodation in the books and publications of the day, all due convenience, to say nothing of the respectability or the elegance of domestic life, is as entirely disregarded as if such qualities had no connection with the farmer or his occupation. We hold that although many of the practical operations of the farm may be rough, laborious and untidy, yet they are not, and need not be inconsistent with the knowledge and practice of neatness and order, and even elegance and refinement, within doors; and, that the due accommodation of the various things appertaining to farm stock, farm labor, and farm life, should have a tendency to elevate the social position, the associations, thoughts, and entire condition of the farmer. As the man himself—no matter what his occupation—be lodged and fed, so influenced, in a degree, will be his practice in the daily duties of his life. A squalid, miserable tenement, with which they who inhabit it are content, can lead to no elevation of character, no improvement in condition, either social or moral, of its occupants. But the family comfortably and tidily, although humbly provided in their habitation and domestic arrangements, have usually a corresponding character in their personal relations. A log-cabin, either,—and I speak of this primitive American structure with profound affection and regard, as the shelter from which we have achieved the most of our prodigious and rapid agricultural conquests,—may be so constructed as to speak an air of neatness, intelligence and even refinement in those who inhabit it.

"A farmer has quite as much business in the field, or about his ordinary occupation, with ragged garments, out at elbows, and a crownless hat, as he has to occupy a leaky, wind-broken and dilapidated house. Neither is he any nearer the mark, with a ruffled shirt, a fancy dress, or gloved hands, when following his plow behind a pair of fancy horses, than in living in a finical, pretending house, such as we see stuck up in conspicuous places in many parts of the country. All these are out of place in each extreme, and the one is as absurd, so far as true propriety is concerned, as the other. A fitness of things, or a correspondence of one thing with another, should always be preserved upon the farm, as elsewhere; and there is not a single reason why propriety and good keeping should not as well distinguish it. Nor is there any good cause why the farmer himself should not be a man of taste, in the arrangement and architecture of every building on his place, as well as other men."

☞ The book may be found for sale at *Tappan & Whittemore's*, Boston.

A PRACTICAL TREATISE ON MANURES.—This is the title of a duodecimo of 204 pages, discussing the subject of manures. It purports to be a republication from the British Society for the diffusion of useful knowledge, and has found its way to our table from some source unknown; but has the imprint of E. S. JONES & Co., Philadelphia. It speaks of all the various kinds of manures, and occasionally of their application. On page 150, in speaking of the *quantity* of ashes necessary to be applied to the acre, it says,—“we think it should never be laid on any land in a less quantity than 800 bushels per acre.” Now we should value *ten* bushels of ashes as quite a valuable help to any acre of land we possess; if we could apply twenty, or a hundred bushels to the acre we should like it better, but would by no means reject it altogether, because we could not apply 800 bushels. From the cursory examination we have found time to give the book, however, we believe there is a great deal in it that is good sound doctrine. Price, and place at which it may be found, unknown.

FARMER AND ARTISAN.—W. G. EDMANDSON, editor and proprietor, Keokuk, Iowa.

FARMER AND ARTISAN.—MARCIAN SEAVEY, editor and proprietor, Portland, Maine.

These two papers appeared upon our table at the same moment, both with the same title, purposes and interests. Separated by a territory wider than that which composes powerful nations in the old world, and yet but a hand's breadth, as it were, of our extended country. The singular coincidence of the birth of these two papers, excited a train of reflections, among which was that of the magnitude of agricultural interests, of the increase of publications on the subject, and the popular favor which they are everywhere receiving.

Both papers are handsomely printed, and filled with instructive articles. We extend to them the right hand of fellowship, welcome them to the broad field of industry, and wish them all success.

ITALIAN SPRING WHEAT.

Col. ARTEMAS FAY, of Southboro', has left with us a sample of this wheat, raised by Mr. ANAPH ANDREWS, of Shrewsbury, Mass., which he says averages *thirty bushels* to the acre, and has done so for the last eight years, on a fair soil; and one year he raised *forty-four* bushels to the acre.

He prepares the seed by soaking it in water—if all the foul seed does not rise, he adds salt to the water, which brings up all the light seed. Sows as many bushels of salt annually per acre, as he does of spring grain of any kind, and thinks he profits by it. Sows wheat after corn. Plants the *Dutton* corn, and gets from 75 to 90 bushels per acre, and says he has gathered this crop for many years past.

If Mr. Andrews does this, others can do as well, if they know how.

SWEET POTATOES.

This vegetable requires a dry, sandy loam, in good condition; for ordinary crops, it is not necessary, however, to be extra rich. In deep and highly manured garden soils the tubers run to a great depth and are long and slender. I have had them in such soil full two feet long, and one-half to three-fourths of an inch in diameter, eatable the whole length—but the same amount of food in a potato four to five inches long is in a more desirable form. The form of the tuber is said to depend much on the form of the hill, kind and quality of soil, &c.,—all of which I have not fully tested.

Plants should be set three to four feet apart each way. The form of the hill may be very well represented by a large tin milk pan, bottom side up. Keep clear of weeds, and coil the vines round on the top of the hill. The vines frequently run 15 feet from the hill, if left to take their own course. They should be dug soon after the first severe frost and put away in dry sand. In winter they must not be exposed to frost or moisture.—*Rural New-Yorker*.

AGRICULTURAL INVENTIONS.

The *New York Tribune*, in an article on inventions, throws out the following important hint for the benefit of inventors and mechanics:—

And this brings us to the moral we had intended ere this to inculcate—that the field of invention in aid of agriculture is broad, inviting, and to a greater extent still untrodden. We have barely begun to bring the potent resources of science to the aid of the food-grower, and very much is to be done in their development and application within the next ten years. There is now obvious need of a locomotive plow, able to break up and thoroughly pulverize the soil to the depth of two feet or more if required, at the rate of ten or fifteen acres per day, tossing stones of two or three hundred pounds aside and uprooting stumps in its steady progress. The value of such a machine would not be measured by its cheapening of the cost of plowing per acre, for it would prove an antidote to drought, and would soon secure at least double the harvest usually obtained from our shallowly and shabbily plowed fields. And more: it would enable the farmer to plow at precisely the right time, when his soil is in the proper condition, instead of being obliged to break up the soil out of season and in all weathers in order to have it done at all. Thus the high British estimate of McCormick's reaper is based less on its estimated saving of expense than on the fact that it enables the farmer to take advantage of any temporary break in the dull weather so common there, and harvest a hundred acres of wheat while he would be saving a quarter of it in the old way. Yet the economy of this and kindred machines is also very great. In the pamphlet before us, we note that the saving by the reaper is variously estimated by farmers who have used it at \$15 to \$25 per day.

Why should not our young men of talent and energy devote both to the contemplation of our implements of agriculture, with a view to their improvement? Consider what strides the last century has witnessed in the improvement of machinery for the production of fabrics, while the ma-

chinery for the growth of food has advanced comparatively little. And, backward as we are, we are far in advance of most other nations. Italy, beautiful, suffering Italy, needs to-day millions of dollars' worth of such implements as we could profitably send her if she only knew how much she might profit by them; and a thousand ingenious, observing, intelligent, stirring Yankees diffused among her people as apostles of agricultural improvement, (especially with the schoolmaster to aid them,) would do her immeasurable good, if her jealous and stupid tyrants would but let them. There are broad fields of effort now open or opening to those inclined and qualified to labor for human progress, and prominent among them is the field of agricultural improvement by machinery. Let it not be neglected; and let those who achieve brilliant successes therein be duly honored and rewarded.

For the New England Farmer.

A STRING OF ANSWERS.

MR. EDITOR:—A "Young Farmer" wishes to obtain some information, in regard to reclaiming a particular piece of upland, of a moist, black, loamy soil. Now the best method to bring it to its "wonted productiveness" would be to give it a thorough plowing, for land which has "never been plowed," if ever so productive, naturally, will not yield very heavy crops, and the result must, of course, be attributed to "bad management" somewhere. Manure of a light substance, such as refuse of hay, would be best to *plow in* on such lands. Ashes applied as a top dressing do well. Swamp muck, lime and ashes as a compost are generally considered beneficial, on lands of this description. Many farmers are too much inclined to cut *all* grasses out of season. Grass cut just in the right time is worth 40 per cent. more at least, than that which has stood until the bottom has begun to dry up and decay; but some allowance must be made for *very moist* land and a wet season. Manure drawn in June "when the land is dry," would do better plowed in, in most cases. Grass seed sown in the spring with oats, is preferable among most farmers here.

Rather moist upland, with a sandy clay sub soil, has done remarkably well, in producing barley, provided the ground is *well manured*.

As for pasture lands, I am not prepared to say what kind of grass seed should be sown to the best advantage. "Variety is the spice of life," therefore, in order to fatten swine, corn would seem to be the best as a general thing, but rye is also used with profit, provided the "supply is equal to the demand."

OH! JAM SATIS.

May, 1852.

FLOWER CULTURE.—The most delightful and healthy employment for ladies, is the culture of flowers. The general superintendence of a garden is generally found favorable to health, by leading to frequent exercise in the open air, and that communing with nature which is equally refreshing to the heart. The tending of flowers has ever appeared a fitting care for the young and beautiful. They then dwell, as it were, among their own emblems, and many a voice of wisdom breathes on the ear from those sweet blossoms, to which they apportion the dew and the sun-beam.—*Southern Cultivator*.

THE STRAWBERRY.

Hear what the *Soil of the South* says about this fruit. We certainly should feel obliged to friend PEABODY, if he would have one of the largest specimens coppered, sides and bottom, excavated, masts set in, and loaded with a few hundred bushels and sent to this port. We will guarantee the cream and sugar to match! Stand back, a little, gentlemen, one of these may roll down and crush a foot or leg!

We are informed by intelligent gentlemen from Cincinnati, that our fruit in the Columbus market averages a third larger than the best that is sold in Cincinnati, and as we now write, April 25th, bushels may be picked from our beds, more than four inches in circumference. And if your correspondent will, with his accustomed liberality in horticultural matters, offer a premium of a hundred dollars, for a bushel of strawberries picked at one picking, the least one of which shall measure four inches in circumference, we will pick that bushel and convince the Ohio cultivators that vines may be dwarfed without dwarfing the fruit. * * * Our vines hug the ground, and the fruit stem frequently occupies more space than the leaves. Did you never see a fruit tree twice dwarfed without affecting the size of the fruit? Why, then, should you doubt the same principle in the strawberry plant! * * * We repeat, what we have before said, and is susceptible of daily, weekly, and monthly proof, that we have picked ripe fruit from our vines ten months in the year, and can always do it six. Our fruit commenced ripening in March, and the same vines are now again in fruit and bloom.

Think of that! Such a strawberry patch on the right, a sugar plantation on the left, and a herd of short horns in the distance, to furnish the cream! Talk of paradise and lands that flow with milk and honey! Give us the sunny South, and Columbus, in Georgia, in particular. These are the Elysian fields, and brother Peabody may expect us in his precinct the first moment we can get out of the furrow.

AN IRISH WOOD CUTTER.—Last week, Mr. Bigelow, of Sherburne, told a newly-arrived Irishman, whom he had just employed on his farm, to go out into his pasture (pointing to a pasture over beyond his orchard,) and cut all the scattering pines. The Irishman went into the orchard, instead of the pasture, and commenced work upon the apple trees. He cut down two entire rows through the orchard before he was noticed. The trees were fine, young, bearing trees, and the damage done was estimated at \$200. The poor fellow seemed hardly aware of the mischief he had done, and said he meant to have got them all down before night.—*Lowell Courier*.

AGE AND PERSEVERANCE.—It is a fault too much practised by both sexes to indulge in listlessness, and a kind of hopeless languor, at the decline of life. Our energies and talents were given us to persevere to the end.

For the New England Farmer.

PRESERVING BIRDS.

MR. BROWN:—I wish to know the best method of stuffing and preserving birds, for cabinets, &c.

If you or some one of your subscribers would be so kind as to give a description of the process, I think it would be very acceptable to many of your readers.

Yours, respectfully,
North Danvers, 1852.

G. J. D.

REMARKS.—Our associate, Mr. FRENCH, is accomplished in this art, has a fine cabinet of most of the birds common in New Hampshire, and we have no doubt will cheerfully give all necessary directions for stuffing and preserving birds.

KENTUCKY CULTIVATOR.—This is, we believe, the first and only paper in Kentucky, devoted exclusively to agricultural subjects. It is published at Cynthiana, by J. ATKINSON, in quarto form, (a mistake, by the way—it ought to be octavo) is printed well, its columns well filled, and the young shoot looks as though it might produce a vigorous crop. You have a wide field, brother, now let us see you make the hill-sides of old Kentucky smile with beauty, and her vales be filled with fatness.

LONGEVITY.—The *New Bedford Mercury* says that there is a strip of land bordering on the sea in South Dartmouth, known as "Smith's Neck," which is about one mile in width by one and a half miles in length. The inhabitants on this strip of land are mostly Quakers, who number 145, the ages of twenty of whom average 86 years, and make an aggregate of 1729 years. Twelve of this number have attained to from 80 to 95 years, making an aggregate of 1134 years, and eight others (the comparatively middle aged) are now from 60 to 78 years of age. This is an amount of longevity not often paralleled.

BUTTER.—We are pleased to inform our readers that this necessary article is becoming much cheaper. For a few weeks past it has been selling at a very high rate, but butter of the best quality can now be had for from 20 to 23 cents.

The *Louisville Journal* has two or three columns devoted to agricultural matters, which are always of the best kind, and must prove of essential benefit to those of its numerous readers who have any fancy for dirt, ditches and dunghills.

New potatoes from Bermuda, have been in the market for a week past, and are selling at \$1.00 per peck.

WHITEWASH.—Mix your wash ready to be applied to the walls, then mix a gill of good flour, in a very little cold water, and pour on boiling water till it thickens; add it to the whitewash while hot, and stir the whole well together. This wash will not rub off, and retains its freshness for many months.

Mechanics' Department, Arts, &c.

THE CALORIC SHIP ERISSON.

It was stated a short time since, that a ship was building in New York, to which a new motive power was to be applied, viz., caloric. A New York letter in the *Transcript* gives some interesting particulars in regard to this new power, and the ship which is to be propelled by it. The correspondent says:

"On Saturday I visited the engine manufactory of Messrs. Hogg & Delamater, of this city, and had the privilege of inspecting Ericsson's caloric engine of sixty horse power, while it was in operation. It consists of two pairs of cylinders, the working pistons of which are 72 inches in diameter. Its great peculiarities consist in its very large cylinders and pistons, working with very low pressure, and in the absence of boilers or heaters—there being no other fires employed than those in small grates under the bottoms of the working cylinders.

"During the eight months that this test-engine has been in operation, not a cent has been expended for repairs or accidents. It is a beautiful and imposing object, and conveys the idea of power and symmetry much more impressively than the largest steam engine that I have ever seen.

"The leading principle of the caloric engine consists in producing motive power by the employment of the expansive force of atmospheric air instead of that of steam, the force being produced by compression of the air in one part of the machine, and by its dilatation by the application of heat in another part."

The great advantages claimed for this improvement, are the saving in fuel, and its entire safety. A ship carrying the amount of coal that the Atlantic steamers now take for a single trip could cross and re-cross the Atlantic twice without taking in coal. A slow radiating fire without flame is required, and this can be best supplied by our own anthracite. An explosion cannot happen to the caloric engine—the only result from neglect will be the stoppage of the machinery. If these great desiderata are really found, and can be successfully applied, the world may look for another revolution in ocean navigation equal to that produced by the application of steam.

The Ericsson is a beautiful model, 2200 tons burthen, and will be ready for sea by October. The machinery is described as of the most perfect kind. The cylinders are 108 inches in diameter—72 inches larger than those in the Collins steamers.—*Boston Journal*.

REMINGTON'S BRIDGE.

Some few years ago the Remington bridge was spoken of all over the country as a mechanical wonder, and the model excited much attention in London. One was built at Montgomery, Alabama, of which the *State Register* gives the following account:—

"Remington's bridge, after standing for months in a very tottering condition, has now broken in two about the middle, and fallen into the ravine. Soon after its completion it was tilted to one side by the wind and its own weight and never righted—the slope being too great to allow the passage of vehicles. It stood unused, a monument of hum-

buggery, for more than a year; and we presume that its destruction will convince even the most decided believers in Remington's theory, that his plan will not answer for long and heavy structures, which, as in the case of the bridge here, will break with their own weight, after losing their original balance, by the action of the weather. The bridge, we believe, was never accepted by the Council, and the city, therefore loses nothing by its unfitness and demolition. It was built under the supervision of Remington himself, and must have been a costly work."

GALVANIZED IRON.

Mr. R. Hunt, in the course of a lecture on mining, delivered at the London Institution, said,—“Considerable attention had been lately paid to the process of galvanizing iron,—a discovery which promises to be of the highest utility. Mr. Nad-smyth, of Patricroft, near Manchester, and Mr. Owen, two gentlemen connected with the government committee on the subject of metals, had lately been making experiments, the result of which would indicate that, by giving iron a coating of zinc, or by combining zinc with iron in its manufacture, it would be much improved, preserved from oxidizing, and rendered less brittle; and that old plates of iron—such, for instance, as had been used for the bottoms of ships—with an admixture of zinc, still possessed its original qualities; and, in fact, iron re-melted from such plates was found to be of a better quality than at first. These experiments had, indeed, excited great attention to the important question, whether iron would not be improved by a small portion of zinc. Tinned iron, exposed to the atmosphere, very soon became oxidized; but in iron protected by zinc, although exposed to all weather, there was no change. Indeed, a piece made bright remained so after being placed in water several months. The zinced iron, which was now used in roofing large buildings—as, for instance, the new Houses of Parliament—had the quality of becoming incrustated with a coat of oxide of zinc, which prevented any further destructive effects from exposure to the atmosphere.”

SWIMMING APPARATUS.—The *Washington Telegraph* states that Mr. De Bibery has invented one of the most important life-saving and swimming apparatus we have ever seen. Application has been made by Mr. De B. for a patent. It is a kind of frock or doublet, and interlaid with small metallic boxes, inflated. This doublet may be worn as an overall on shipboard, and it is impossible for the wearer to sink below the shoulders, and Mr. De B. asserts that a person may remain in the water any length of time, and the water has no effect whatever on the buoyancy of the dress.

NEW INVENTION.—The *Oswego Times* describes a machine to prevent steam boiler explosions. The principle upon which it acts is that of a feeder, which will keep the water in the boiler always at the same height.

ROSE INSECTS.—The following remedy will be found a most effectual one:—To three gallons of water add one peck of soot and one quart of un-slacked lime. Stir it well—let it stand for twenty-four hours, and when the soot rises to the surface skim it off. Use a syringe for applying it.

Boy's Department.

TIME WELL IMPROVED.

We had the privilege and gratification (a gratification it was truly) one evening last week, of witnessing the operations of a beautiful little steam engine, manufactured by a brace of clever lads in this city, during their leisure hours after school and vacations. The cylinder is 2 1-2 inches in diameter, with a stroke of 7 1-2 inches, and it has all the fixtures of a well-bred machine, and works beautifully. The engine is all the work of two pairs of youthful hands, and is certainly a compliment to their ingenuity and perseverance. But what pleased us most was to see two lads, surrounded with all the amusements of the day, and with almost unlimited means for gratifying themselves, turning their attention to the useful things instead of the follies of life. While other boys have danced and rode and wasted their time in that which profiteth nothing, they have made themselves masters of the principles on which a steam engine is built, manufactured one, and have put it in operation. Well may they, as they do, feel proud of their achievement.

We allude to this mainly for the purpose of showing our young friends what they can do in their leisure moments, and to impress upon them the necessity of keeping themselves occupied with something useful and instructive, instead of wasting their time and exposing themselves to the bad influence of others with whom they are too apt to associate when idle.—*Weekly Mirror*.

SONG FOR BOYS.

When life is full of health and glee,
Work thou as busy as a bee!
And take this gentle hint from me—
Be careful of your money!
Be careful of your money, boys—
Be careful of your money;
You'll find it true, that friends are few,
When you are short of money!

But do not shut sweet mercy's doors
When sorrow pleads, or want implores;
To help to heal misfortune's sores,
Be careful of your money!
Be careful of your money, boys—
Be careful of your money;
To help the poor who seek your door,
Be careful of your money!

SLANG.

The use of slang phrases, to which so many persons in this country are addicted, is, if not an invariable mark of vulgarity, indicative of low associations at some period of life, and a certain want of dignity and refinement. The young naturally fall into this habit, so offensive to good taste, not only because they have examples in their associates, but because the columns of too many newspapers that fall into their hands abound with low slang, and the wit and vulgarity of theatre lobbies and street corners. As the use of such terms serves no good purpose whatever, but tends rather to what is low and demoralizing, parents ought especially to discountenance it in their children; and, so far as themselves are concerned, give up the habit if it should have insensibly grown upon them.—*Home Gazette*.

INDEPENDENT HORSE RAKE.

We give above a representation of Delano's Independent Horse Rake in full operation. The cut hardly needs explanation.

Each tooth acts separately, its head being suspended by a rod. This rake has been in use two years in Massachusetts, and several hundreds of them have been sold. We see them highly recommended by the best farmers in this State and New Hampshire, and also by the Worcester, Essex and Middlesex Agricultural societies. We have used one for two years past, and find it to answer all the purposes for which it has been recommended. It operates well on land either rough or smooth, and rakes as fast and clean as any other which we have seen, and has the advantage of requiring but one person to work with it, and he can ride comfortably, instead of working hard on foot, as one is obliged to do with the revolver or spring tooth.

The patent right for the counties of Essex, Middlesex, Norfolk, Franklin, Worcester and Suffolk, is owned by James W. Odlin, Esq., of Exeter, N. H., who has authorized Ruggles, Nourse, Mason & Co., and Parker & White, to sell the rakes, the ensuing season. The price is twelve dollars, without wheels.

The rake is usually fitted to the hind wheels of a single horse wagon. The operator cleans the rake, when filled with hay, by pressing with his foot upon the triangle, without stopping the horse. The work is very light for both man and beast, and on the whole, we advise our friends who are not already suited with a horse rake to try one of the Independents.

For the New England Farmer.

AGRICULTURE AS AN OCCUPATION.

BY RALPH HOLBROOK.

MR. EDITOR :—It has been a source of satisfaction to me that the Legislature of your State has taken so much interest in this important occupation, and I could wish that the Legislature of this State, (N. H.) would take as much interest in the same cause. I have lived some fifty-eight years in the world, and have followed no other branch of business, excepting getting out lumber and cord wood for the market, in addition to my own fire wood, during the winter season, when there was not much other work to be done on the farm.

Although I have followed this branch of business for so many years, yet I never have seen the time when I had any inclination to exchange it for either of the many occupations which mankind follow in the world, to make money by, in addition to a living. And I can truly say, that the longer I follow my occupation the better I like it, and the more profitable I can make it. It has long been a source of regret to me to see so many young men who have been brought up on a farm, as soon as they become of age quit their former employment, and seek for some other (as they consider it) more profitable employment. In many instances that have come within my observation they have been disappointed, and in some cases they have taken the wise, but it may have been humiliating step, of returning to their former employment.

Now I would not advise any man who has nothing but his bare hands to begin the world with, to involve himself in debt to obtain a farm, stock, and tools; for in so doing, (to use the farmer's phrase) he would have rather a hard row to hoe; and yet, if a young man who enjoys good health can find some profitable employment, and will be satisfied with a fair compensation for his labor and be economical, he may, in the course of a few years,

lay up something handsome to begin business with. There are some men who yet stick to the old method of managing a farm (but their number is yearly decreasing) who, instead of plowing their land in a proper manner with a good plow, will murder it with an instrument that in former days would have been called a plow, and apply their manure in a manner corresponding with the plowing.

Seeding, and cultivating is done in the same manner, and at harvesting they complain that their crops are poor, and they cannot make anything at farming! They cannot do anything more than make the two ends of the year meet. My reply to such men is, if they will let me take a farm, stock and tools, and if I cannot do something more than make a living, taking one year with another, I will not lay it to the farm as being in the fault, but attribute it to some other cause.

Another person, who is in possession of a good farm, well stocked, with a supply of tools to manage the same, will say, only give me a capital, or money enough, and I can manage my farm to suit me. My opinion upon this is, that if such men would only manage their affairs according to their circumstances, and adopt the old maxim of cutting the garment according to the cloth, they might make a good living, improve their farm, and realize a handsome profit in the end. I have been of the opinion for many years that no man has yet arrived at anything like perfection in this business; and after so many years of experience as I have had, I consider myself as scarcely out of my apprenticeship at it, and consider it as differing greatly from the employment of the mechanic. If the blacksmith does not get his iron in the right shape to fit the place, he can heat it and shape it till it will fit; so it is with the joiner, if he has not got a good joint the first time trying, with his saw, plane, or chisel, he can alter it until he makes a good joint. Now it is not so with the farmer; if he has not his manure in the right condition, or does not apply it to the right kind of soil, or has not put his seed in at the right time, or put in the right quantity, he cannot alter it, but must abide the issue. As I have spoken mostly upon the subject of my own occupation, I would not wish to be understood to be of the opinion that there are no other branches of business of importance to mankind, for all occupations that are honest are necessary, and we are but fellow-laborers and co-helpers to each other.

I subscribe myself yours with respect,
Bedford, N. H., 1852.

R. H.

AN EDITOR IN THE GARDEN!

THE HOE and the PEN! Glorious implements! they move mind and matter, and embellish both. No wonder our brother in Wisconsin was inspired! He had escaped to the garden; Heaven's sunlight and breezes were upon his brow; he stood in the midst of springing plants, of opening, fragrant flowers and cheerful songs. A cask of Byron's gin could not have kindled such a flame as he felt glowing in his heart. Hear what he says, kind reader; it will touch your heart, and perhaps urge you to the garden to catch a fit of inspiration like his:—

"We have been gardening this week, and, hav-

ing no breath to blow the bellows of aspiring politicians, have substituted the scissors for the pen. If those editors who are hurling their big words of defiance and reproach at each other, would just take the 'shovel and the hoe,' and go out into the golden sunlight and the pure air of heaven, we think they would forget their angry feelings, and possibly acknowledge that their opponents were no greater rogues than themselves. *Envy and malice can never exist in the presence of bursting buds and springing grass, and no man can sow his seed in anger, because the implied trust in the bounty and care of Providence of the act itself precludes any such wicked emotion.* With the songs of the birds, cheerfulness, and may be the dim-remembered hopes and aspirations of our now distant childhood, come thronging back on our hackneyed hearts; and, if the freshness and luxury of these new feelings, thus aroused, moisten the eye, we need not be ashamed. Go out, then, ye sweltering denizens of grim and cobwebbed offices, into God's glorious sunlight, that your sluggish blood may be quickened in its flow, and your hearts refreshed by a communion with nature; if you blister up your hands and get a kick in your back by a few hours of manual labor, so much the better for you. We have set the example, and can speak advisedly."

For the New England Farmer.

PLANTING TREES.

MR. BROWN:—Dear Sir,—In Col. Wilder's very valuable remarks at one of the agricultural meetings this winter, respecting the cultivation of the dwarf pear, he instances three "*indispensable conditions of success.*" And one of these conditions is, that the tree shall be planted deep enough to bury the quince stock *entirely below the surface of the ground.*

Now one of the prime rules of arboriculture is, that a tree is not to be set too deep. Better far too shallow, than too deep. Whoever has had any experience, or exercised any observation, knows well, that more young trees are killed from too deep setting than anything else. Well, our pear trees come to us from the nurseries, worked, very often, six and eight inches up from the root, on the quince stock. Then are we to sink the root all that distance into the ground? I shrink from doing so—others are equally perplexed. And we summon you or Col. Wilder to solve the problem.

Yours truly,
Lawrence, May 13, 1852.

H. F. H.

REMARKS.—We have no doubt that Col. WILDER will reply with as much satisfaction to "H. F. H.," as with pleasure to himself.

EXTRACTS.—"I see in your paper the history of some remarkable cows. I have one which is 12 years old next August; she has had 17 calves, and raised all but one, and she is a No. 1 milker.

Vermillion, Ill."

A correspondent in Haverhill, N. H., states that the "Messrs. Chandler, of that town, have a bull calf of the Ayrshire, Durham and Devon breeds, that weighed at three hours old 130 lbs."

Mr. George Carpenter, of Orange, has a lamb

which at birth weighed twelve and a half pounds, from a sheep one year old. Mr. R. P. Gilbert, of Gilead, Conn., has a two year old sheep which brought a pair of twins weighing nearly 19 pounds.

INTELLECTUAL CULTURE.

While we deem it our duty to encourage the better cultivation of the farm, we deem it also of the first importance, that the mind and the heart be not neglected. They need cultivation as much as the earth, and will as readily yield good fruits. Cultivate the intellect. Few instances can be found, of men who have struggled with difficulties in acquiring knowledge, and so must have acquired habits of industry, diligence, self-government, and self-denial, who yet have remained bad men. Such instances are rare. There may be distinguished scholars and men eminent in the sciences, and as statesmen, who are bad men; but we know not how much worse they would have been, but for their love of knowledge. Knowledge is directly power, and indirectly virtue; and is generally productive of happiness. No man needs it more than the farmer. It is his duty and his interest to cultivate knowledge and a love of knowledge himself, and give to his sons and his daughters the means of obtaining it. What amusement is so innocent, and at the same time so cheap, as a good book? There are corrupting books—and the world is full of them—but generally speaking, they are less corrupting than idle and vicious companions; both should be avoided. Who ever knew a young man idle himself, and the companion of idlers, that was not ignorant, corrupting and conceited? And "who ever knew an old man towards the close of life, amid all his regrets, grieve at the time and efforts devoted to useful studies, feels knowledge a drag on the heaviness of old age, or who would exchange it for anything but true virtue, or the pure joy of heaven?"—*Vermont State Journal*.

THINNING OUT VEGETABLES.

There is a greater loss in suffering vegetables to stand too thick, than most cultivators are aware of. It does require considerable nerve to commit indiscriminate slaughter upon fine growing plants. For instance here are ten beautiful melon vines, just beginning to run, with fruit blossoms forming. Now, who has the bold hardihood to draw them all out but three or four, and throw them wilting away! Who can take the beets just as their tops give evidence of roots below, and separate them to ten inches? It is a hard matter, we must confess, and is not properly done one time in twenty; but to have bulbs, top-roots, melons, cucumbers or squashes, it must now be done, and the increased vigor of the remaining plants will repay the trouble. Then fall to and spare not; no top-rooted plant or bulb should stand so thick that the hoe will not pass freely between them. No vine should have more than four or five plants left to a hill.

Snap beans look so pretty growing thick that we hate to disturb them; but if you would have the bushes yield their pendant treasures, thin out to ten inches. We know of nothing that will bear as thick planting as English peas; in place of thinning them, shade the ground around them; now that they are in bloom and in pod, they will continue in fruit much longer; the shade enriches

the land and saves culture. It is not always those that make the earliest and best; but those who thin judiciously and cultivate understandingly. Most gardeners plant seeds too thick, trusting to thinning out in their growing state, but alas! they look so uninviting, and plead so eloquently for life, that degenerate inferior plants are the rewards of our false philosophy.—*Exchange*.

TO CORRESPONDENTS.

W. B. W., *Gilford*.—Mr. WILLARD speaks of the grass mentioned by him as "a new variety." He must have been acquainted with the "witch grass," as it is called in New Hampshire, and "piper grass," in Massachusetts, and would not be likely to confound his new variety with this.

G. A. C., *Amherst, N. H.*—Hogs should always have access to the ground, and in warm weather a wallowing hole with water. This is necessary to their health and thrift. But, they also require a warm, dry bed. Wallow as they will, no animal enjoys a soft, warm, dry lodging, better than the pig. All animals have their parasites—even the common house-fly has its louse, so very small as to be totally invisible to the naked eye; we have recently examined him through the microscope, and a curious chicken he is. The pig has his enemy too, in the shape of lice, one of which would make about ten thousand of that of the fly. When the animal is neglected, these increase and gather along on the top of the neck, back, and about the roots of the ears. By wallowing in the mire, he not only cools himself, but becomes encrusted with mud, which, in being rubbed off, takes the vermin with it. If hogs lie on a plank floor, great care should be taken that a cold draft does not rush up between the cracks of the floor.

Every animal on the farm requires a dry and warm shelter to resort to when it pleases.

J. W. B., *Wolboro', N. H.*—Trees girdled by mice may frequently be saved by inserting strips of healthy bark from other trees. Trim the edges of the girdled bark with a sharp knife and insert the strips, running up and down, so as to fit very close; in a tree three or four inches through insert several strips; bind a cloth round the whole and bank up with earth. Another method is to plant young seedlings at the root of the girdled tree, and splice their ends to the upper portion of the girdled part. We have known this mode successful in some instances.

A good whitewash may be made by slaking good lime, adding a little salt, and sifting in half a pint of hard wood ashes to two gallons of the wash, for outside work. This is cheap, and upon the whole, about as good as anything in a cheap way.

H. E., *Practical Suggestions*.—Excellent, and shall have a place by-and-by. They will be appropriate at any time, and are, therefore, postponed

a little till we get the "spring work" out of the way.

M. G., *Portland, Me.*—The apples left by you from a gentleman in Cumberland, are the Newtown Pippin, and give plenty of evidence that they do not flourish remarkably well in New England.

C. S., *Lancaster, Mass.*—Thank you for your interesting papers; shall be glad to receive articles as you propose,—short, and applicable to our purpose.

Several valuable communications received we shall find room for soon. "Farmer's Daughters," "A word to Farmers about Summer Schools," "What knowledge is most valuable to the Farmer," "The present condition of Veterinary Medicine in its relation to Agriculture," "Chemistry and Vegetable Physiology," and several others, are all of sterling merit. While we express our obligations to the writers of these and other communications, we would ask them to continue their favors, as during the busy months of summer with most farmers, they suspend writing for more active operations, and we shall have more time and space to devote to other contributors.

To the inquirer through the *Franklin Democrat*, we would say, that we gave Col. LITTLE's recipe for making grafting wax as coming from a gentleman intimately acquainted with all the operations of grafting. We have prepared the grafting cloth by his recipe and like it; and have also used wax where the proportions were reversed—the rosin largely prevailing. "The proof of the pudding is in the eating," and that of the wax in the working. Prepare it so that it may be handled comfortably, and it is not important what the proportions are.

Ladies' Department.

COLORS IN LADIES' DRESSES.

Incongruity may be frequently observed in the adoption of colors without reference to their accordance with the complexion or stature of the wearer. We continually see a light blue bonnet and flowers surrounding a sallow countenance, or a pink opposed to one of a glowing red; a pale complexion associated with canary or lemon yellow, or one of delicate red and white rendered almost colorless by the vicinity of deep red. Now, if the lady with the sallow complexion had worn a transparent white bonnet, or if the lady with a glowing red complexion had lowered it by means of a bonnet of deeper red color—if the pale lady had improved the cadaverous hue of her countenance by surrounding it with pale green, which, by contrast, would have suffused it with a delicate pink hue, or had the face—

Whose red and white Nature's own sweet and canning hand laid on,

been arrayed in a light blue, or light green, or in a transparent white bonnet, with blue or pink flowers on the inside, how different and how much

more agreeable would have been the impression on the spectator! How frequently, again, do we see the dimensions of a tall and *embonpoint* figure magnified to almost Brobdingnagian proportions by a white dress, or a small woman reduced to Lilliputian size by a black dress. Now, as the optical effect of white is to enlarge objects, and that of black to diminish them, if the large woman had been dressed in black, and the small woman in white, the apparent size of each would have approached the ordinary stature, and the former would not have appeared a giantess, or the latter a dwarf. Sky-blue is always considered as most becoming to fair persons, and it contrasts more agreeably than any other color with the complimentary orange, which constitutes the key-note, as it were, of the general hue of their complexion and hair. Yellow and red, inclining to orange, contrast best with dark hair, not only in color, but in brilliancy. Violet and green, also—the complementaries of these two colors—do not produce a bad effect when mingled with dark hair.

HOW TO RENDER ASSISTANCE IN ACCIDENT.

We digest for the benefit of readers, especially in country places, the best course to be adopted in emergencies like the following:—

In case of a fractured or dislocated limb, let the sufferer lay on the ground until a couch, door, gate or plank can be procured, for in raising him up he may die from faintness or loss of blood. When procured, place the door or gate along side of him, cover it with something soft, and let men convey him steadily home, but do not put him into a vehicle of any kind.

In Fits.—If a person fall in one, let him remain on the ground, provided *his face be pale*, for should it be a fainting or temporary suspension of the heart's action, you may cause death by raising him upright or bleeding; but if the face *be red or dark colored*, raise him on his seat, throw cold water on his head immediately, and send for a surgeon and get a vein opened, or fatal pressure on the brain may ensue.

In Hanging or Drowning, expose the chest as quickly as possible and throw ice water over it, whilst the body is kept in a sitting position.

Children in Convulsions.—Deluge the head with cold water and put the feet into warm water, till medical aid can be procured.

Poison.—Give an emetic of a teaspoonful of mustard flour in a teacupful of warm water every ten minutes, till vomiting ensue or medical assistance is obtained.

Burns and Scalds.—Let the burnt part be bathed in a mixture of turpentine and of olive oil, or linseed oil, equal parts, till the pain abates; then dress it with a common cerate, and defend it from the air.—*N. Y. Farmer and Mechanic.*

A WIFE'S INFLUENCE.—A late writer observes: "It is not presumption to believe that if Henrietta, the wife of Charles I., had been born a Huguenot, instead of a Catholic king, the civil wars, the commonwealth and the Protectorate of England, would never have been." The same Henrietta was the mother of James II., whose devotion to the Catholic church caused his own expulsion from the throne, and the revolution which seated

William and Mary upon it. Henrietta, therefore, may be said, in a certain sense, to have changed the course of modern English history, and affected thereby the destiny of the world. Who shall say that women wield no political power!—*Home Journal*.

GARDENING FOR GIRLS.

Some of the best writers on education in the country have advocated the importance of this subject, and the peculiarly healthful and strengthening influences that attend it.

Miss Beecher, in her work on Domestic Economy, recommends every father to "set apart a portion of his yard and garden for fruits and flowers, and see that the soil is well prepared and dug over, and all the rest may be committed to the children. These would need to be provided with a light hoe and rake, a dibble or garden trowel, a watering pot, and means and opportunities for securing seeds, roots, buds and grafts, all which might be done at a trifling expense. Then, with proper encouragement, and by the aid of such directions as are contained in this work, every man who has even half an acre, could secure a small Eden around his premises."

The writer of a very popular treatise on gardening says:—"A love of flowers is one of the earliest of our tastes, and certainly one of the most innocent. The cultivation of flowers, while it forms an elegant amusement, is a most healthful and invigorating pursuit. The flower-garden, while it agreeably occupies the time, does not impose a heavy tax on the pocket; and there are very few flowers but what may be cultivated to as great perfection in the garden of the peasant as of the peer. It is a taste, too, which is well adapted to the female character, and affords much rational amusement to the recluse. The cultivator of flowers is not confined to the gratification of beholding the expanded flower, when it spreads forth its glories to the meridian sun; every stage of its growth has been a source of delight, from the moment the seedling peeps above the ground, to the period of its perfect development; and a flower which has been reared by one's own hand is viewed with tenfold delight, compared to one, the growth of which has not been witnessed or provided for."

PRESERVING FRUITS IN THEIR OWN JUICE.

As the season of fruits is now approaching, it may be interesting to our lady readers to be informed of a method by which the most delicate fruits can be preserved so as to retain their flavor for an almost indefinite period. Thirteen bottles of fruits so preserved were exhibited lately at Rochester, N. Y., by Wm. R. SMITH, of Wayne county, viz.: five of cherries, two of peaches, one of strawberries, three of different varieties of currants, one of blackberries, and one of plums. They were examined by a committee, and found of fine flavor; and the committee expressed the opinion that the art of preserving fruit in this manner is practicable and valuable, and that the fruit, when carefully put up, can be made to keep as long as may be desirable.

The method of preserving is thus given to the New York State Society by Mr. SMITH:

They are preserved by placing the bottles, filled

with the fruit, in cold water, and raising the temperature to the boiling point as quickly as possible; then cork and seal the bottles immediately. Some varieties of fruit will not fill the bottle with their own juice—these must be filled with boiling water and corked as before mentioned, after the surrounding water boils.—*Southern Cultivator*.

For the New England Farmer.

DIRECTIONS FOR BOILING RICE.

Take one pint of good clean sound rice, wash it well in several waters, rub it well between the hands, and pour off the water at each washing as soon as possible, to take off all the small particles that would be likely to color the rice. This done, take one quart of water to one pint of rice, put in one-half teaspoonful of fine salt, put it over the fire, let it boil fifteen minutes without stirring, and then take it off. If the rice has not taken up all the water, pour it off; if it is good rice it will take it all up. When this is done, give the rice one good stirring, and the only one, place the kettle on some hot embers where it will simmer for fifteen minutes more. This done, your rice will come on the table, each grain separate, as white as snow and well cooked. JOSEPH LELAND.

Grafton, April 22, 1852.

DOMESTIC RECEIPTS.

CURD CHEESE-CAKE.—One quart of milk, half a pound of sugar, a quarter of a pound of butter, five eggs, one teaspoonful of grated nutmeg, a quarter of a pound of currants.

Warm the milk, and turn it to a curd, with a piece of rennet, or a tablespoonful of the wine in which a rennet has been soaked. As soon as the milk is a thick curd, take it out with a broad ladle or spoon, and lay it on a sieve to drain. Beat the eggs, and add the drained curd, also the sugar and butter, which must have been beaten to a cream, then the spice and fruit. For those who would prefer it sweeter, more sugar may be added. Line your pie plates with paste, fill them with the above mixture, and bake in a moderately hot oven.

COTTAGE CHEESE-CAKE.—One pint of curd, one gill and a half of cream, three eggs, sugar, nutmeg, and cinnamon to the taste.

Mix the curd and cream thoroughly together. Beat the eggs, add them with the sugar and fill them with the mixture. Bake in a moderate oven.—*National Cook Book*.

RICE BLANCHMANGE.—This forms an excellent accompaniment to preserves of any kind, or to baked apples. It is made as follows:—Put one teaspoonful of whole rice into half-a-pint of cold water; when the rice cracks or begins to look white, add one pint of milk, and a quarter of a pound of loaf sugar. Boil it until the rice has absorbed the whole of the milk, stirring it frequently the whole time. Put it into a mould, and it will turn out when quite cold. If preferred hot, it may be again made warm by being placed in the oven for a short time. It may be flavored with lemon, cinnamon, &c.; but is most wholesome without, and forms both an elegant and very economical dish at any time.

LEWIS G. MORRIS'

THIRD ANNUAL SALE, BY AUCTION, OF

Improved Breeds of Domestic Animals

WILL TAKE PLACE AT

MOUNT FORDHAM, Westchester Co., (11 miles from City Hall, New York,) on Wednesday, JUNE 9, 1853.

JAMES M. MILLER, Auctioneer.

APPLICATION need not be made at private sale, as I decline in all cases, so as to make it an object for persons at a distance to attend. Sale positive to the highest bidder, without reserve.

Numbering about fifty head of Horned Stock, including a variety of ages and sex, consisting of Pure Bred Short Horns, Devons, and Ayrshires; Southdown Buck Lambs, and a very few Ewes; Suffolk and Essex Swine. Catalogues, with full Pedigrees, &c., &c., will be ready for delivery on the first of May—to be obtained from the subscriber, or at the offices of any of the principal Agricultural Journals or Stores in the Union. This sale will offer the best opportunity to obtain very fine animals I ever have given, as I shall reduce my herd lower than ever before, contemplating a trip to Europe, to be absent a year, and shall not have another sale until 1854.

It will be seen by reference to the proceedings of our State Agricultural Society that I was the most successful exhibitor of Domestic Animals, at the late State Fair.

I will also offer a new feature to American Breeders—one which works well in Europe; that is, letting the services of male animals; and will solicit propositions from such as see fit to try it. CONDITIONS.—The animal hired, to be at the risk of the owner, unless by some positive neglect or carelessness of the hirer; the expense of transportation to and from, to be borne jointly; the term of letting, to be one year or less, as parties agree; price to be adjusted by parties—to be paid in advance, when the Bull is taken away; circumstances would vary the price; animal to be kept in accordance with instructions of owner, before taking him away.

I offer on the foregoing conditions, three celebrated Prize Bulls, "Major," a Devon, nine years old; "Lamarine," Short Horn, four years old; "Lord Eryholme," Short Horn, three years old. Pedigrees will be given in Catalogues.

At the time of my sale, (and I would not part with them before) I shall have secured two or three yearly sets of their progeny; and as I shall send out in August next a new importation of male animals, I shall not want the services of either of those next year. I would not sell them, as I wish to keep control of their propagating qualities hereafter.

I also have one imported Buck, the prize winner at Rochester last fall, imported direct from the celebrated Jonas Webb; and also five yearling Bucks, winners also, bred by me, from Bucks and Ewes imported direct from the above celebrated breeder; they will be let on the same conditions as the Bulls excepting that I will keep them until the party hiring wishes them, and they must be returned to me again on or about Christmas Day. By this plan, the party hiring gets rid of the risk and trouble of keeping a Buck the year round. All communications by mail must be prepaid, and I will prepay the answers.

Mount Fordham, March, 1853.

L. G. MORRIS.

1w*3m

State Mutual Life Assurance Co.
OF WORCESTER.

GUARANTEE CAPITAL, \$100,000.

Hon. JOHN DAVIS, President.

Hon. ISAAC DAVIS, } Vice
Hon. STEPHEN SALISBURY, } Presidents.

THIS Company was chartered in March, 1844, and commenced business on the first of June, 1845. Its business is conducted on the most economical principles.

The well considered and invariable policy of this Company has been to prefer the safety and mutuality of the assured to the showy advantages of a large number of policies, and an imposing amount of receipts. California risks have been uniformly declined, and the multiplication of policies in cities considered especially liable to cholera has not been encouraged.

The cash premiums of this company are calculated on the most approved tables of the probability of life, and at the lowest rates which are deemed safe.

Pamphlets, explaining the principles and advantages of life assurance, with forms of application and rates of premium, may be had by application at the Office of the Company in Worcester, or of the Agents in all the principal towns in New England.

CLARENDON HARRIS, Secretary.

Dec. 27, 1851.

1st

Bound Volumes.

BACK VOLUMES of the NEW ENGLAND FARMER, elegantly bound in Muslin, Gilt and Embossed, are now for sale at this office.

Boston, March 30, 1853.

1st

The Farmers' Library.

JUST RECEIVED, the following assortment of Agricultural and Horticultural Books, embracing the standard works of eminent American and European writers, on the Farm, the Orchard, the Garden, &c. &c.

	PRICE.
American Farm Book, by Allen,	\$1.00
Farmer's Treasure, by Faulkner and Smith,	.75
Dana's Muck Manual,	1.00
Prize Essay on Manures, by Dana,	.25
American Muck Book, by Browne,	1.00
Lectures on Practical Agriculture, by Johnstone,	.75
Elements of Scientific Agriculture, by Norton,	.50
Principles of Agriculture, by Thaez,	2.50
Practical Agriculture, by Johnstone,	.75
Agriculture for Schools, by Blake,	1.00
Catechism of Agriculture and Chemistry, by Johnstone and Norton,	.25
American Agriculturist, by Allen,	1.00
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Book of the Farm, by Stephens and Skinner,	4.00
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Downing's Country Houses,	4.00
Rural Architecture, by Allen,	1.25
Downing's Landscape Gardening and Rural Architecture,	3.50
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Bridgeman's Gardener's Assistant,	2.00
Bridgeman's Kitchen Gardener's Instructor,	.50
American Fruit Culturist, by Thomas,	1.00
Gardener and Complete Florist,	.25
Florist's Guide, by Bridgeman,	.50
New England Fruit Book, by Ives,	.55
Youatt and Martin on Cattle, by Stevens,	1.25
Rose Culturist,	.38
Johnson's Gardener's Dictionary, by Landreth,	1.50
Rural Economy, by Bousseaingault,	1.00
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Bigelow's Plants of Boston,	1.25
Genera of Plants of the U. S., by Gray, 2 vols.	12.00
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Hive and Honey Bee, by Richardson,	.25
Bee Keeper's Manual, by Miner,	.50
Bird Fancier, by Browne, paper 25 cents,	.50
Townley on Bees,	.50
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American Poultryers' Companion, by Bement,	1.00
American Fowl Breeder, by Moore,	.25
American Herd Book, by Allen,	3.00
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Diseases of Animals, by Cole,	.50
Hints to Sportsmen, by Lewis,	1.25
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Knowlson's Complete Cow Doctor,	.25
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Treatise on Hot Houses, by Leachars,	1.00
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Loudon's Encyclopaedia,	10.00
Schenck's Text Book,	.50
Breck's Book of Flowers,	.75
Downing's Fruit and Fruit Trees,	1.50
For sale at the Publishers' prices by RUGGLES, Nourse	
MASON & Co., Quincy Hall, (over the Market,) Boston.	
April 3, 1853.	1st

Spring Seed Grain.

300	BUSHELS WHEAT, (Black, Sea, Scotch Fife, Bald Club and Java.
200	bushels Buckwheat.
800	do. Barley.
200	do. Spring Rye, (Trus.)
800	do. Bedford Oats.
100	do. Millet.
10	do. African Millet, (Extra.)
For sale by	RUGGLES, Nourse, MASON & CO.,
March 20, 1853.	1st Over Quincy Market, Boston

Bolton Grey Fowls.



A few pairs CHOICE BOLTON GREY FOWLS, for sale; price moderate. Inquire at this office. May 1, 1853.

1st

Mexican Guano.

A NEW ARTICLE is now offered to the Agriculturist and Dealers, under the above name, from its having been found near the Mexican coast. It has been analyzed by C. T. Jackson, M. D., State Assayer, Boston, Dr. David Stewart, of Baltimore, and others. Dr. Stewart says it contains the largest proportion of Phosphates he has ever met with in Guano.

The following are the result of the analysis made by C. T. Jackson, M. D.:

Water.....	93.40
Vegetable Matter.....	15.80
Soluble Salts (in Water) Phos. Soda.....	0.18
Phosphates of Lime and Magnesia.....	60.50
Insoluble Matter (Silex).....	0.10

99.99

The quality of this Guano as a rich fertilizer, and the great reduction in price compared with the Peruvian, is such as to render it an object for the agriculturist and dealers to buy and give it a trial. It has been tried in the vicinity of Norfolk, Va., and much approved by the Farmers, those who are now buying and using of it freely. It may be obtained in lots to suit purchasers of A. D. WELD, 127 State Street, PHINEAS SPRAGUE & Co., T Wharf, or of P. A. STONE, who is the importer, and may be found at 15 Crescent Place, Boston, where also other information may be obtained respecting it. It is also for sale by Parker & White, 8 and 10 Gerlish Block, Blackstone Street, D. Prouty & Co., 19 North Market Street. March 27.

Albany Drain Tile Works,

No. 60 LANCASTER STREET,—West of Medical College.

THE subscriber has now on hand, and will furnish to agriculturists, Horse Shoe and Sole Tiles of the most approved patterns, suitable for land drainage, of a superior quality, of over one foot in length. Horse Shoe Tile 2½, 3½ and 4½ inches calibre, at \$12, \$15 and \$18 per 1000 pieces. Sole Tile 2½ and 3½ inches calibre, at \$12 and 18 per 1000 pieces. They are so formed as to admit water at every joint, draining land from 12 to 20 feet each side of the drain, being the cheapest and most durable article used. The great importance of thorough drainage is daily becoming more apparent.

Orders from a distance will receive prompt attention.

Albany, N. Y., April 10. 12w—6 JOHN GOTT.

Ayrshire Calves.



For sale at moderate prices, two full blood Ayrshire Calves, one 9 months and the other 2 months old.

Apply at office of New England Farmer. May 22, 1852. tf

J. H. HAMMOND, Architect.

THE subscriber offers his services to those about erecting new, or altering old, buildings. He will furnish drawings and working plans, specifications, and every thing in relation to a clear understanding of what is wanted. He thinks he is able to present some new views in the construction of Barns, or in altering old ones, whereby more conveniences may be obtained and at less expense. His charges will be so moderate as to enable every farmer to avail himself of his services.

Address J. H. HAMMOND, Grafton, Mass.

May 22. tf

Now for Sale,



The most perfect and in every way the best Farm known to the subscriber. Said farm contains about sixty acres, and is on the east bank of the Connecticut river in Montague Meadows, Mass.

Also, about thirty-six acres in two of the most choice lots on the plain in said Montague.

Also, about sixty acres in two lots of the most valuable woodlands within the valley of the Connecticut river. They are near the Vermont and Massachusetts Railroad, at Groat's Corner, in said Montague.

Said above mentioned farm and other lands have been selected within the last sixteen years with a hope of possessing them during life, and all propositions for them have been refused. But as the subscriber has seen fit to change his location from Montague Meadows to Northfield Farms, they are now offered, and at prices which will ensure their sale. A further description will be given by mail if requested, and the subscriber will show the premises to any who may wish to purchase.

DEXTER PIERCE.

Northfield Farms, March 6th, 1852. tf

Garden Seeds.

WE respectfully solicit the attention of purchasers of GARDEN SEEDS to our extensive stock, which we offer for sale. We have all the sorts of Vegetable Seeds that have proved worthy of cultivation; also, Grain, Grass and Flower Seeds. All the varieties are raised and selected expressly for our trade, and we do with confidence recommend them to all who desire to procure seeds that will prove true to their names.

☐ Catalogues gratis, on application.

RUGGLES, NOURSE, MASON & CO.,

Jan. 1.

Over Quincy Market, Boston.

Choice Seed Peas.

OUR stock of Seed Peas for the present season, is remarkably fine, and comprises all the really desirable sorts, such as

Early Prince Albert.
Early Kent.
Early Hill.
Early Washington.
Bishop's Dwarf—(grows 12 inches high.)
Eatable Poddied Sugar.
Dwarf Blue Imperial.
Dwarf Marrowfat.
Missouri Dwarf Marrowfat.
Champion of England.
British Queen.
Fall Matchless Marrow.
Black Eyed Early Marrow.
Cluster—(for Field Culture,) &c. &c.

We can recommend them all, and purchasers may rely on their proving true to name. Please call and examine them at our Warehouse and Seed Store, over Quincy Market.

RUGGLES, NOURSE, MASON & CO.

Boston, March 20, 1852. tf

Seed Potatoes.

CHOICE Early and Late sorts can be procured at our Seed Store. We invite particular attention to the "Eastern Early Blue," for very early, and the "Danvers Seedling" for late crops; of the latter sort 832 bushels were grown from 28 bushels of seed, the past summer.

RUGGLES, NOURSE, MASON & CO.,

Boston, March 27.

Over Quincy Market.

Oyster Shell Lime.

THIS article, for use to the best advantage with meadow mud, may be mixed as follows:—Place a layer of about 12 inches of mud or peat, then a layer of from 2 to 3 inches of lime, and so on alternately until the heap is from 6 to 10 feet in height; let it stand at least 4 weeks. In this time the lime will be all slaked. Then turn it, and it will be fit for use.

By this process the humic acid which is contained more or less in all meadow land, is neutralized, and a compost is formed nearly equal to the best barn-yard manure.

This lime is offered at the low price of one shilling per barrel, delivered at the Kila, at Medford Street, Charlestown, or if packed in barrels or hogheads, at 35 cents per bbl., and delivered at any of the Railroad Depots in Boston or Charlestown, by JAMES GOULD, Agent, No. 70 State Street.

April 10, 1852.

8w½

Farm for Sale,



Pleasantly situated on BEACH HILL, in the town of WARWICK. Said farm contains 175 acres of good land, well divided into Mowing, Tillage, Pasturing and Wood-land, with a two-story dwelling-house, two barns, sheds for cattle, a good carriage house, wood house, and other out-buildings, all in good repair. A large orchard, with a good assortment of Fruit, with over 900 scions set last spring, all in a flourishing condition.

This farm has a good supply of Wood, Water and Timber. As I wish to go West in the spring, I will sell my Farm, Farming Tools, and Stock, very low. The farm alone for \$1600.

Any one wishing to buy a good Farm for a LITTLE MONEY, will do well to call and look at the place before purchasing elsewhere. A liberal credit will be given if desired. Inquire at this office, or of ELI GROUT, on the premises. Warwick, Mass., May 15, 1852. tf

The Massachusetts Militia,

AND all other Soldiers of 1812, '13 and '14, or in case of their death, their widows and minor children, can obtain Land Warrants, on application to the subscriber. ILLINOIS LAND TITLES, granted to soldiers of the war of 1812, will be purchased.

Apply to

Feb. 7, 1852.

6m

EBEN SMITH, JR.,

20 Court Street, Boston.

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Pure Devon Stock.



Dec. 27, 1851.

COWS, HEIFERS, BULLS and BULL CALVES for sale.
Apply at Office of N. E. Farmer, or to the subscriber.

B. V. FRENCH,
Braintree, Mass.
1yr

Agricultural Warehouse and Seed Store,

Quincy Hall, over the Market, Boston.

THE Proprietors having recently enlarged their Warehouse, and increased their works at Worcester, would respectfully invite the attention of Planters and Dealers in AGRICULTURAL and HORTICULTURAL IMPLEMENTS, GARDEN and FIELD SEEDS, &c., to their stock, comprising the largest and best assortments to be found in the United States, which are offered at low prices.

OF PLOUGHS—we have the greatest variety of kinds and sizes.

Improved Sod Ploughs, for flat furrows—Improved Scotch Ploughs, for lapped furrows—Improved Stubble Ploughs, which are especially adapted to deep tillage, or varying from 6 to 12 inches in depth.

Self-sharpening, Hill Slide, Sub-soil, Double Mould, Corn, Cotton, and Rice Ploughs.

Cylinder Hay Cutters, Smith's Patent Lever Gate, and others. Patent Corn Shellers, with and without Separators, Seed Sowers, of various sizes and prices. Batchelder's patent Corn Planter, Improved. Fanning Mills of various sizes, Horse Powers, Threshing Machines, thermometer Churns, Robbins' patent, Centrifugal Churn, Cylinder Churn, Dash Churn, Corn Planters, together with almost every article wanted on the Plantation, Farm or Garden.

Illustrated Catalogues sent gratis on application, post paid.
RUGGLES, NOURSE, MASON & CO.
Boston and Worcester, Mass., Jan. 1, 1852.



GRAPE VINES.

Diana, Isabella, Catawba, Strawberry and other varieties of Grape Vines, fresh from the nursery.

FRUIT TREES.

Fruit and Ornamental Trees, and Shrubbery of all kinds, from the best nurseries in the vicinity of Boston.

SCIONS.

Scions of all the choice kinds of Apples, Pears, Plums and Cherries, selected by experienced fruit growers.

HORTICULTURAL TOOLS.

A large assortment of Pruning and Budding Knives, Twig Cutters, Pruning Shears, Hedge do., Pruning Saws, Grafting Chisels, Strawberry and Weeding Forks, Transplanting Trowels, Sets of Ladies' Garden Tools, Shovels, Spades, Forks, Hoes in great variety, at wholesale and retail, at low prices, at RUGGLES NOURSE, MASON & CO., (over the market.) Boston, April 24, 1852. 6w1

NEW ENGLAND FARMER

Is published on the first of every month, by JOHN RAYNOLDS and JOEL NOURSE, at Quincy Hall, South Market St., Boston.

SIMON BROWN, Editor.

FREDERICK HOLBROOK, } Associate
HENRY F. FRENCH, } Editors.

Terms, \$1.00 per annum in advance.

The FARMER, is devoted exclusively to Agriculture, Horticulture, and their kindred Arts and Sciences; making a neat volume of 576 octavo pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at the office of publication.

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NEW ENGLAND FARMER, (WEEKLY,)

An Independent Agricultural Family Newspaper.

The News and Miscellaneous departments under the charge of WILLIAM SIMONDS, will include a full and careful report of the news of the Markets, and the news of the week, such as Domestic, Foreign and Marine Intelligence, Congressional and Legislative proceedings, Temperance and Religious Intelligence, and a general variety of Literary and Miscellaneous matter, adapted to family reading, comprising more useful and valuable reading matter than any other Agricultural Newspaper published in New England. Everything of a hurtful or even doubtful tendency will be carefully excluded from its columns.

Terms \$3.00 per annum in advance.

The monthly contains nearly the same matter as the Agricultural department of the weekly.

Postmasters and others, who will forward four new subscribers on the above named terms, for either publication, shall receive a fifth copy gratis for one year.

All orders and letters should be addressed, post-paid,

RAYNOLDS & NOURSE,

QUINCY HALL, SOUTH MARKET STREET, BOSTON.

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For any distance not exceeding 50 miles	5 cents per year.
Over 50, and not exceeding . . . 300 miles	10 cents per year.
Over 300 " " " " " " " "	15 " "
Over 1000 " " " " " " " "	20 " "
Over 2000 " " " " " " " "	25 " "
Over 4000 " " " " " " " "	30 " "

To prevent any misunderstanding, we quote the 15th section of the law of 3d March, 1845, which is as follows:

SEC. 16. And be it further enacted, that the term "Newspaper," herein before used, shall be, and the same is hereby defined to be, any printed publication, issued in numbers, consisting of not more than two sheets, and published at short stated intervals of not more than one month, conveying intelligence of passing events, and bona fide extras and supplements of such publication.

RAYNOLDS & NOURSE, PROPRIETORS.
OFFICE...QUINCY HALL.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.**FARM WORK FOR JULY.**

"Our Saxon fathers did tell rightly call
This month of July, 'Hay-moneth,' when all
The verdure of the full-clothed fields we mow,
And turn, and rake, and carry off; and so
We build it up in large and solid mows.
If it be good, as everybody knows,
To 'make hay while the sun shines,' we should choose
Right times for all things, and no time above."

July is usually a hot month. The sun has attained its extreme of splendor and heat; under its influence the buds and blossoms are developed into foliage and flowers, and captivate our senses by their exquisite structure, and delicious fragrance. The seed so lately cast into the ground has sprung into beautiful living plants, covering the earth with verdure and the promise of coming crops. Small as they then were, they now have produced plants weighing many ounces, and filled with life and beauty the open, barren blank of spring. None can have failed to observe this wonderful change, and lift the heart in gratitude to Him whose constant care is over all.

LATE SOWING.—There is still something to be done in committing seeds to the ground. Cabbage and cucumbers may now be sowed for late pickling. Turnip seed scattered among the corn often produces a fine crop without material injury to the corn. Sow during or immediately after a gentle rain, and cover with a hand rake.

Grounds which it is desired to appropriate to grass may be conveniently laid down at the last hoeing by keeping the surface level, and sowing and raking in the seed as the hoeing is performed, while the moist earth is near the surface. Be liberal with the grass seed; every year's experience strengthens our convictions that the farmer is just about as wise in stinking his grass seeds as the commander of an ocean steamer would be in laying in a hundred tons less coal than necessary to take his ship to Liverpool.

If the grasses you wish to cultivate do not occupy the ground, others that you do not fancy so well will. There is no surer way to drive out

white weed, sorrel, chicory, dock and mallows, than to supply the grass seeds so liberally as to cover the entire surface with their stools. *Three pecks or a bushel of red top and twelve quarts of herd's grass to the acre is little enough. Six or eight pounds of clover seed may be sown upon the snow in March.*

WEEDS.—Ah! here are our old friends again. But we cannot afford to keep them, though there is a world of beauty in each. Like all living things, they seek to perpetuate their kind, and will deposit countless thousands of their minute seeds to make sure a future crop. Faithful, constant hoeing only will prevent their being in the ascendant; and this continued for two or three years, dressing in the mean time with well composted manures, will eradicate them so that they will annoy little afterwards. The garden that has been tended with care must not be neglected now that haying and other duties press upon the strength and time.

SHORT PASTURE.—The weather favorable for haying is not likely to keep the pastures green and luxuriant. The milch cows, therefore, require attention. They must draw upon something more nutrient than the east wind or pasture browse in order to present you full udders night and morning. Until the "cow corn" is fit to cut, give them a daily feed of shorts or oil meal with out hay, or mow the patches of grass in rich spots where it would be likely to lodge.

HAYING.—This is the prime work of the month, requires the closest application and taxes the health and strength severely. Let it be performed quietly and systematically, without hurry, confusion or noise; then it will be well done; and as you feed from your ample bays through the winter they will yield the fragrant perfumes of summer, and repay you in the fat ribs and glossy skins of your stock.

HEALTH.—Do not be tempted to over-exertion. It is not by a few surprising efforts that the steam engine penetrates the solid rock, or lifts enormous

weights, but by quiet, unceasing application; and so must the farmer act in haying time—the more labor to be accomplished, the greater the necessity for system and carefulness. A sudden effort and haste often disables a hand for the whole season. Drink sparingly of cold water when heated—drink slowly, a swallow at a time, taking the glass away from the lips at each swallow. Retire early, and rise early, and while you labor in the cool of the morning, listen to the new voices about you; the bitters in the meadow, calling to his faithful mate in notes not unlike the noise made by pumping; the lark, whistling on the topmost twig of the old apple tree, and the numerous other voices peculiar to the fresh and delightful hour. Man, only, perverts nature in transposing the order of time for rest; the birds and beasts retire and rise early—

"Night is the time for rest;
How sweet, when labors cease,
To gather round the aching breast
The curtain of repose,—
Stretch the tired limbs, and lay the head
Upon one's own delightful bed!"

Grass cut after the seeds are fairly formed is much more nutritious than when cut sooner.—Fields should be examined and a sound judgment exercised in regard to the proper time of cutting.

GRAIN.—This, too, will demand attention, and is better for being cut before the seeds are thoroughly ripe.

JULY is the commencement of the harvest of the year. Everything is in full vigor and activity.

"The vegetable world is all alive;
Green grows the gooseberry on its bush of thorn,
The infant bees now swarm around the hive,
And the sweet bean perfumes the lap of morn;
Millions of embryos take the wing to fly,
The young inherit, and the old ones die."

BONE DISORDER—SYMPTOMS—REMEDY, &c.

As the spring opens, many cows, and even young cattle and oxen, are developing the unmistakable effects of this widely prevalent disease. I am no professed veterinarian, Mr. Editor, but as my stock have suffered more or less from the disease, I have been led to study and read some upon the subject, and I will venture to make some remarks, and give a few hints upon it.

The foundation of the animal structure, the bones, and the inward apparatus for the support of that structure, by the purification of the blood, the lungs, are, in their more important sense, composed of phosphate of lime. Now this article is supplied to the system, by means of food, and is primarily drawn from the soil, by the process of vegetation. As its base (lime) is a mineral, the soil must contain this mineral, together with phosphoric acid, to feed the plant. In this section, when our lands are new there is a good supply of this in the soil, but after cropping extensively, the ingredients are withdrawn, and it is not replaced, the soil is said to be exhausted, and the herbage it produces will be *mostly or completely* destitute of phosphate of lime, as the circumstances may be. This is the condition of a great many of our summer pastures. Hundreds of thousands of tons

of bone earth, in the form of bones and muscles, and milk, have been transported from our New England towns, to the cities and to foreign countries, and nothing has been brought back, to repay this constant draft. The recent important discoveries, showing the cellular tissues of the lungs to be in a large measure composed of phosphate of lime, and the actual benefits that have resulted in some cases from the application of this mineral in a medicinal form, go to confirm my preconceived opinions. If this mineral plays so important a part in the animal economy, a deficiency of it in the food must be attended with serious and often fatal results. That such food is often so deficient, chemical analysis has recently and frequently shown.

The first symptoms of the bone disease, so far as I have noticed, discover themselves in a loss of appetite, and a disposition to champ old bones, gnaw boards, rotten wood, and especially bits of old stable floors, on which horses have stood.—They have usually had a healthy appearance about the head and eyes, but shrink and fall away across the loins, and in extreme cases, become so weak in the back and spine as to wiggle in their posterior parts when they walk. When fed upon the best of hay, they seem to have no desire to eat it, but will often look at you earnestly for something more, and sometimes poor and mouldy hay, or straw, will be preferred to the sweetest hay, or to meal or roots.

In advanced stages of the disease, cows should be dried and turned into new pastures. All stock which are diseased by it, will recruit the best upon new pastures, that is, those that contain the elements, and produce "sweet feed," clover, herds grass and red top. Cattle feeding upon such grasses, will not champ hours upon old bones, or rotten wood. They should not be bled or physiced, they have not a particle of blood to lose. In winter feed them with oat meal, rutabagas, clover, &c. Potatoes and carrots are not so good, or Indian meal: If it can be procured, give a pint of bone meal twice or thrice a week; if they refuse it in meal, turn it down in water, mix it with their salt, and if they need it, they will soon learn to eat it. Save your bones, and boil some time in strong lye made of potash, or from the leach, or boil them with ashes and water to soften them, and in either case, throw them where they can resort to them daily, and they will help themselves to all they need. Do not fear that the lye or bones will hurt them.—*American News—Keene, N. H.*

THE WHITE NATIVE GRAPE.

You ask for some information relative to a white native grape, cultivated by me. I will give you, as briefly as I can, the history of it.

The banks of the Pawtuckaw (a small branch of the Lamphrey river,) abound with wild grape; so that in the space of two miles you may meet with twenty different kinds, all of which have originated from seeds, and from one of which this vine originated. The old vine appears to be sixty or seventy years old; it stands in a cold, rocky, uncultivated spot, and climbs some large maples, flourishing without cultivation. I have known it for eighteen years, and never but what it has borne some every year. The fruit is from one-third to double the size of the Isabella with us;

it is rather of a drab color, but when very white of a reddish cast, quite sweet, and with a very white aroma. *I have never known it mildew, which most of the white varieties are apt to do. The fruit is much larger on the cultivated than on the old stock, but it does not get its full flavor till the vines have borne two or three years, or till the roots get strong. It is perfectly hardy in our climate, and usually stops growing about the first of September. The fruit ripens about the middle of the month in common seasons, and will keep for some time. It is a good bearer: a neighbor has a vine about ten years old, (a layer from the old vine,) which for the last two years has borne more than three bushels each year of very fine fruit. When planted on the south side of a building, it frequently ripens a week earlier. They are now scattered through the whole of New England, and one lot in New York. About two years ago I planted some small vines on a high, dry knoll in the open field to test their growing on high, dry ground, and I have never seen any grow better. Whenever I have sent the fruit as a specimen, it has invariably given perfect satisfaction; and should it prove adapted to the wants of the people, I shall feel myself richly rewarded for my trouble.—*Plow, Loom and Anvil.*

For the New England Farmer.

HOW TO PRESERVE VINES FROM BUGS.

MR. EDITOR:—As the season has arrived when bugs commence their depredations upon squash, pumpkin, cucumber, and sometimes other vines, perhaps some of your numerous readers would like to hear of a *simple* way to prevent this evil. Two years ago, I planted a piece of ground with vines, of the kinds above mentioned; they came up and began to look quite flourishing, but suddenly the bugs commenced operations upon them in good earnest. The bugs were of two kinds; mostly very small, striped with black and yellow, and a few large black ones, commonly called "pumpkin bugs."

I showered the vines several times with soap suds, but it seemed to do very little good. I then tried the effect of *common wood ashes*. After *wetting* the vines (if they were dry,) the ashes were *sprinkled* upon them until the leaves were covered.

Unless there was considerable rain, or very high winds, the ashes would adhere several days, and when it had fallen off, if the bugs had returned, the vines were sprinkled again in the same manner as before. This was repeated as occasion required, until the vines were too large to be seriously injured by their enemies. The bugs were completely frustrated in their designs, and the ashes did not injure the vines in the least.

I applied ashes to my vines last year in the same manner, with like success, and have commenced doing the same this year, and I have no doubt the effect will be the same. Bugs are the most numerous in warm dry weather, and therefore the vines, at such times, should be looked to the more frequently. Yours, &c., S. D. W.

Groton, June 16, 1852.

✂ Mechanics should ever remember that punctuality is the life of trade.

For the New England Farmer.

POTASH WATER FOR TREES.

BY M. M. COFFIN.

MESSRS. EDITORS:—Much is said at the present time in many of our public journals, recommending a solution of potash in water as a wash for fruit trees. The recipes given vary somewhat, but the most common is, "a pound of potash to a gallon of water."

MR. JOHN BACHELDER, of this town, on Saturday, the 5th inst., applied a wash as above directed—except adding a slight sprinkling of rye meal, to a fine thrifty orchard of his, consisting of *one hundred and six* Baldwin trees. On the following Monday he found, to his perfect astonishment, that he had completely *killed* his trees with this act of kindness. The bark of the trees above ground was crisped and the wood thoroughly saturated to the pith.

Some of our most distinguished orchardists have viewed the premises and are surprised at the result, whilst *all* must regard it as an unfortunate occurrence, a pecuniary loss to Mr. B., and a fact worth knowing.

From this the important question arises, was it simply the addition of rye meal that made the wash so destructive, or is there danger of making it too strong? We are of the opinion that a wash of potash and water alone, made as here directed, and applied to trees at this season of the year—that is to say, trees whose bark is thin and free from moss—*will kill them.*

Yours for the benefit of whom it may concern,
Hampton Falls, June 14, 1852. M. M. C.

REMARKS.—We thank friend COFFIN for his communication; it will be the means of saving many an orchard from the fate which Mr. Batchelder's has met. No recommendation to use the strong potash water for trees can be found in the columns of the *New England Farmer*. On the contrary, we have given recipes which we know to be valuable, and might be used even in unskilful and careless hands, without danger of destroying the trees. We have been shown trees repeatedly, washed with potash water of even less strength than "one pound to a gallon," where the effect was just what you describe it to be on Mr. Batchelder's trees. That potash water of the strength used on Mr. B.'s trees has been used many times with impunity, we do not doubt; and that it sometimes destroys them is well known. The best way, therefore, is not to use it of a greater strength than one pound of potash to two and a half gallons of water for young trees, and a gallon and a half or two gallons for old trees.

It is no small loss in time and money to have an orchard thus summarily ruined, and knowing the caustic power of potash, we have been extremely careful in recommending its use. Although potash water is highly recommended by some, we never use it, but use strong soap suds made of common soft soap and find all the advantages from it which we have expected to derive from any wash.

A GEM.

With two or three exceptions, we have never read a volume of what is called poetry in course, and probably never shall. Yet we ardently love *Poetry*; think we can see it all around us in our daily walks, and constantly feel its force. Many persons have poetic ideas, but He who framed us has seen fit to impart to a few, only, that nice selective and discriminating power over language indispensable to the true poet. This power must be coupled with an exquisite sense of rhythm which will move the appropriate language in regular successions, flowing as it were upon the peaceful currents of the soul, or rousing its energies at will. Johnson and Pope wrote poetry, exact in measure and strong as iron bars; yet, had they written till this time, they could not have produced anything like the gem we give below. Scott and Byron and Wordsworth wrote beautifully, and passages of surpassing power may be found in them all; but their great volumes, as a whole, savor too much of the "machine." Mrs. Hemans, Tennyson and Motherwell wrote in a different vein—the heart and affections are more apparent.

We had rather be the author of this nameless, unclaimed effusion, than of many pretending volumes. Is n't it a gem?

Clear had the day been from the dawn,
All chequered was the sky;
Thin clouds, like scarfs of cobweb lawn,
Filled heaven's most glorious eye.

The wind had no more strength than this,
That leisurely it blew,
To make one leaf the next to kiss,
That closely by it grew.

The flowers, like brave embroidered girls,
Looked as they most desired,
To see whose head with orient pearls
Most curiously was tyred.

The rills that on the pebbles played
Might now be heard at will;
This world the only music made,
Else everything was still.

And to itself the subtle air
Such sovereignty assumes,
That it received too large a share
From Nature's rich perfumes.

For the New England Farmer.

HILL FARMING.

Much of the hilly and stony ground of New England bears in its surface-peculiarities a strong resemblance to the hill country of Syria, which once supported a population far greater than we have reason to believe was ever supported by any other land. It therefore becomes an interesting inquiry, how that uneven country was ever made capable of feeding and sustaining such a vast population; and it is particularly so, when we consider that so much of it remained wild, even in the day of its greatest prosperity, that wild beasts were very numerous, and very dangerous to the property of the shepherds.

The astonishing fertility of the land of Palestine,

as an unquestionable fact of history, calls up the inquiry, How was it so?

The cultivators of our stony hills complain that they cannot raise their lands to great fertility, because they are so washed by the heavy rains. But in this they suffer no difficulty which the people of Palestine were not subject to. The storms were so furious in that land, that the houses, the villages and cities, were built upon high ground, and, to a good extent upon rocky summits. The storms to which we are exposed, and the washings of our hills, are certainly no worse than those in that celebrated land.

The peculiarities of their agriculture were, in many respects, the same two thousand years ago, of the other nations of the east. Their implements of husbandry were such as none among us would consent to use. Still, the unquestionable evidences are before us, of the extreme productiveness of the land of Palestine. This we would inquire into.

Two peculiarities of their management are entitled to our present attention. The first is, their artificial preservation of their soil from washing down their hill-sides. They did not gather away to a distance the stones that were brought to the surface, and leave the soil to wash off until another multitude of the same kind were exposed, and then treat them in the same way. They ridged the stones along the hill-sides, so as to serve as a dam to keep the soil from washing down. Thus they kept the soil from escaping, and all the decomposition of stones which took place under those circumstances of exposure to air and rain, served directly to enrich the entire soil. This was of far greater consequence than will generally be supposed. Every kind of rock is more or less rapidly decomposed by the action of air and rain, and all thus furnish properties which go directly to promote the growth of plants.

Many of our farmers have been for a long time casting every stone into some place of imprisonment, as though it never was to be regarded as anything else than an intruder upon the hill-sides. Their attention will be called to the question of the service which these intruders offer to the soil, when disposed of in the manner described.

Another of the peculiarities which I wish to notice, is that of fruit growing. In no land has the cultivation of fruit been more thoroughly attended to. The kinds of fruit which could be produced there were raised in the greatest abundance, and must have constituted an important item in the dependence of the people. And in the cultivation of fruit trees and vines upon their hill sides, they bound the soil together with millions of minute but efficient stays. The history of ancient days, and of the favor which rested upon Israel, even "HEALTH AND PEACE," is yet with us, and from it we may draw instruction. When the hill-farmers of New England shall take such measures to preserve the soil, and produce the necessary food for the support of man, they will rise to a high rank among earth's teeming millions. c.

Mason, N. H., March, 1852.

CARROTS.—From experience in their growth, and a close observation of their effects, we are prepared to say, that this is one of the best roots grown for the food of milch cows—and are justified in affirming, that the carrot is a highly nutritive root—that milch cows, fed properly with it,

yield more milk than when fed upon hay alone, yield it of a better quality, and, withal, thrive upon it; but carrots, as well as parsnips, sugar beets, or mangel wurtzel, or, indeed, any other roots, when fed to milch cows, should be mixed with cut straw, hay, or fodder of some kind; besides which they should be given other portions of long provender uncut, or cut, as the feeder may best like, by itself. When given roots, cattle, of course, consume less long food, but still they should receive such portion, as when added to the roots they may receive, will form an equivalent in nutrimental matter to a full feed of hay, fodder, or other long provender.—*American Farmer*.

HARVESTING WHEAT.

BY DANIEL LEE, M. D.

Many farmers cut wheat too late, (waiting until it is dead ripe) and still more permit the grain to remain a long time in the field in small stacks after it is harvested. Both practices are wrong. Wheat intended for seed ought to be fully ripe before it is cut; but that which is to be ground into flour should not stand too long. The proper time is to cut it in the "doughy state," out of the milk, but not hard or flinty. Where one has many acres to harvest, it is difficult to avoid cutting some a little too early, or a great deal too late.

So soon as the straw is sufficiently cured, the crop should be housed, stored away in a barn, or thrashed. Wheat straw is worth half the price of hay, if the grain be cut at the right time, and the straw properly saved from rain, dew and sunshine. Where good hay is cheap, say four or five dollars a ton, the saving of wheat straw for forage need not command much care. But at the South, where first rate hay is rarely worth less than seventy-five cents or one dollar per 100 lbs., the stems and leaves of all the cereal grasses should be preserved from damage by exposure to the elements, and used for wintering stock. Sheep are kept all winter on straw alone, by the large wheat growers in Western New York; and so are mares and colts and cattle. Good barns, sheds and stables are not so common as they ought to be, and no farmer who has the means to make these useful buildings should be without them. They will pay a high interest on their cost, greatly economize fodder, and operate to improve our live stock.—*Southern Cultivator*.

WHAT ANY DAUGHTER OUGHT TO BE.

In the Law of Spain written by Alfonso, "the wise," about the year 1260, there occurs the following passage. It is in a law respecting the duties of the governesses of the king's daughter:—

"They are to endeavor, as much as may be, that the king's daughters be moderate and seemly in eating and drinking, and also in their carriage and dress, and of good manners in all things, and especially, that they be not given to anger; for besides the wickedness that lieth in it, it is the thing in the world that most easily leadeth women to do ill. And they ought to teach them to be handy in performing those works that belong to noble ladies; for this is a matter that becometh

them much, since they obtain by it cheerfulness and a quiet spirit; and besides, it taketh away bad thoughts, which it is not convenient they should know."

THE APPLE TREE BORER.

One of the greatest of all evils that the fruit grower has to contend against is the apple tree borer, which also attacks the quince, mountain ash, white ash, locust, hawthorn and the aronias. We have repeatedly called attention to their destructive habits, and have heretofore given the illustrations below, but as the evil is perpetual, so must our promptings be. Beside, some thousands of persons are now readers of the *Farmer*, that were not so, when these subjects were alluded to before.

This borer is the larva of the two-striped sawfly, (*Saperda bivittati*), which is truly represented by the following cut. This is the beetle or insect in its perfect state.



This figure shows the size of the insect. The upper part of the body is marked by two longitudinal white stripes, among others of a light brown. The face antennae, the under side of the body and legs are white.

This beetle comes forth from the tree in June, in the night, flying from tree to tree for food or companions, resting in the day time among the leaves on which it feeds. In June, July and sometimes in August, it deposits eggs on the bark of the tree, at or near the ground.

The larvæ or young borers from these eggs are fleshy, round, whitish grubs, without legs. This grub eats through the bark, and remains there the first winter. The next season it penetrates the wood, throwing out dust or cuttings, like saw dust, by which it may be traced, generally ascending, as it proceeds, and boring deeper into the tree. Its whole passage is usually about 12 to 15 inches. It becomes a full grown borer as here represented.



The third season, nearly two years from its entrance, it approaches the surface, where it undergoes its final transformation, becomes a beetle and leaves the tree.

Rarely, the borer gets off the track, and descends; sometimes it enters the tree several feet above the ground, and seldom it enters the limbs of the tree.

Keep the trees well washed and the bark smooth,

and keep the grass, weeds, and rubbish away from the trees that they may be examined conveniently. During the time of depositing the eggs, wash the trees occasionally with a rather strong lye of wood ashes, or a solution of *one pound of potash to two gallons of water*. A strong lye is liable to injure the trees. These and other corrosive substances may destroy the eggs, or annoy the insects; but they are not always sure. The borers may enter between the roots that branch high, where washes do not affect, or the eggs may not be destroyed; therefore keep the trees smooth and clear of every thing around them, and examine them often; and when the young borers have just penetrated the bark, they are all easily destroyed. So attend to them the first season.

Make a wash of two quarts of soft soap, or whale oil soap, half a pound of sulphur and two gallons of water. Add also camphorated spirit, asafetida, tobacco and other offensive substances, and wash the tree with it. A little clay or lime added will make a coating holding these substances, which may be offensive to the beetle or young borers, and prevent their operations.

After the borers have penetrated the trees they may be destroyed by running a wire or other flexible substance into the hole.

For the New England Farmer.

PEAT MUD—SEA WEED.

MR. BROWN:—I wish to make the following inquiries, which I would be happy to have you answer through the columns of your paper or otherwise.

I have a very valuable peat swamp on my farm, which is easy to get at with a team; I also live only six miles from an excellent sea-weed beach; I keep six head of horned cattle and a pair of horses; I have no barn cellar or manure shed, but want to make as much good manure as I possibly can this year. My land is a warm sandy loam. Now please tell me how to manage. I would like also to inquire if sea-weed is good manure for a young orchard. Also what is the best kind of plow for my land—it is very smooth—and the price of the same.

Where can I procure a full blood Devon bull calf, and at what price, delivered at Kingston depot, on Stonington and Providence railroad, or at Stonington depot, in Providence?

An answer to the above questions will greatly oblige,
Yours truly, JOHN DIMON.
Wakefield, June 8th, 1852.

REMARKS.—If we had access to sea-weed we should spread and plow it in, in as green state as possible, while plump with all its juices. But if not convenient for you to use in this manner, pile it up, layer after layer, with your peat mud, and after it has remained a year overhaul the heap and mix with it such animal or special manures as you can supply. In this way you may make large quantities of excellent dressing. Sea-weed would

be a good dressing for an orchard by plowing it in. Considerable land has been kept constantly under tillage and producing good crops for many years in New England, by a free application of sea-weed alone.

The Deep Tiller, No. 73, sold by Messrs. Rugles, Nourse & Mason, we should think the suitable plow for your land. Full rigged with wheel and cutter, the price is \$13.00. We cannot give you the information you desire at present, in relation to Devon bull calves, but advise you to communicate with B. V. French, Esq., of Braintree, Mass.

For the New England Farmer.

NEAT STOCK.

S. BROWN, Esq.:—Dear Sir,—I have to acknowledge your favor of yesterday; and in reply, beg to say, that it gives me much pleasure to comply with your request, although at present I cannot find leisure to write an article for the press; yet I trust your friends may be able to make some use of the following plain statements.

The general stock of horned cattle in Nova Scotia is now very much improved by the frequent importation of pure blood Ayrshires, Durhams, Herefords and Devons; these breeds, crossed with the best of our old stock, has produced a profitable breed both for the dairy and the feeding stall.—The Ayrshire and Devon cattle are well suited to our upland districts; while our best alluvial lands support the Durhams and Herefords, without risk of degeneracy, provided that ordinary care is exercised. In the Dutch settlements there is a small compact breed of cattle known as the "Dutch breed." They are easily kept, make excellent working oxen, and the cows yield well to their size, and are particularly well adapted to light pastures.

Respecting the price of cattle, it may be stated that a fair milch cow, in her prime, is generally valued at £8, [about \$5 is a pound.] Four year old oxen, when trained to the yoke, readily command from £18 to £20 per pair.

I think the average yield of our dairy stock may be fairly stated at 10 to 12 quarts per day in the milking season. I have often seen 20 quarts and upwards realized, and I have made 10 lbs. of butter per week from a cow, though this may be regarded as much above the average; 6 lbs. is considered good dairy yield.

If we do not produce butter and cheese equal to any made on the American continent, the fault lies in our management, not with the country.—Annapolis cheese and Cumberland butter are now far famed and deservedly popular. Nor is there any reason why other districts may not vie with these established patron dairy localities. Our rural population generally are very deficient in that pains-taking habit necessary to constitute a high grade of agricultural character.

Nova Scotia is, emphatically, a grazing country, though its natural advantages in this respect have yet to be improved. Our farmers have no defined system, no fixed purpose, nor combination of action. Each is doing a little of everything, and effecting comparatively nothing. Instead of mutual operation, it is too often regarded a virtue to cherish selfish motives and make a secret of practical management. Now and then we may find a fair

dairy stock, a pair of good oxen, a solitary attempt at amateur breeding, &c.; but in vain do we look for any system whereby Nova Scotian produce can attain that uniform character for high perfection which nature intends her to enjoy. To prove our facilities for prosecuting systematic agriculture, I may state the heavy rich lands bear a due proportion to the light uplands.

Young cattle can be raised in the upland districts at half the cost of their keep in the districts where land is of double the value. If these breeding districts would follow breeding only, and do it mutually and systematically, they would receive fair prices from the fattening districts, find ready sale at home, and save the money they now lose in their abortive attempts to make good beef; and the richer districts would save the valuable food for fattening which they now dissipate in raising young animals, which before they have their growth have cost as much per head as would purchase two head from the upland farmer, giving him a profit. Windsor, Horton and Cornwallis ought to supply Halifax with as good beef as can be found in any part of the world. By a systematic arrangement, the supply would be steady and uniformly good; salting ship stores and for export might be carried on as a branch of business, and the breeder, the feeder, the curer and the merchant would each approach perfection in their branches, and establish a steady, remunerative business.

Until our agricultural operations are characterized by system, it matters little what breeds of cattle we have. Unless we have some establishments within our own borders for pure breeding, our money must find its way to the pockets of foreign breeders every time we attempt to renovate our degenerate stock. At present I consider our labor and our animal food lost for want of mutual co-operation and systematic arrangement. Every good beef ox we see in the market has cost double what he should have done, and for every good animal we see, we ought to witness fifty.

System and combined action has rendered the mountains of Scotland as valuable as the alluvial plains comparatively. It is from the highlands that the Carse farmer procures his feeding stock; he could no more attempt to raise them profitably than the highland breeder could essay the feeding process successfully.

I trust you may be able to make sense of these hurried remarks, as I can hardly find time to throw them together. I fully appreciate your motives; they find reciprocity with me, and I trust you will favor me occasionally in the same way.

I am, dear sir,

Your obed't servant, JAMES IRONS.

Halifax, May 18, 1852.

REMARKS.—We thank our correspondent for his communication and obliging disposition, and hope to hear from him often. The number of our readers in the provinces will justify us in yielding a portion of our columns to their contributors, which we shall cheerfully do.

A man with a large family was complaining of the difficulty of supporting all of them. "But," said a friend, "you have sons big enough to earn something for you now." "The difficulty is, they are too big to work."

For the New England Farmer.

OLD PASTURES—WITCH GRASS.

MR. EDITOR:—Will you, or some of your correspondents, please inform the readers of the *Farmer* the best method of reclaiming old pasture land that is too stony for plowing? And whether there is any way to kill out "witch grass," other than digging it out by the roots? By so doing you will greatly oblige a

SUBSCRIBER.

Mercer, Me., June 12, 1852.

REMARKS.—In the monthly for May, page 233, you will find in an article on "Scarifying the Soil," some remarks upon reclaiming old pastures. But would it not be better, after all, to let pastures which are too stony to plow run up to wood and then give more attention to enriching lands which are capable of being plowed? One acre, well plowed, enriched and seeded to the various pasture grasses, would afford an abundance of feed for a cow for four or five months. Where farms are small and land high, we shall be compelled to pay more attention to pastures. Some of the best farmers in this region say that *one acre* ought to feed a cow through the year; that is, if a man has twenty acres, he ought to feed well twenty cows from it. We know those who do more than this, but the number is extremely small compared with those who require half a dozen acres for each cow.

There is a paragraph going through the papers, stating that if witch grass is covered with earth three or four times during the summer, while hoeing, that it will kill it. But we doubt. We have tried the most careful cultivation by hoeing and raking out every root we could gather, but found the next year that small pieces enough of the roots were left to bring up an abundant crop. Try late plowing in the autumn; and just before the ground freezes harrow thoroughly.

THE RADIATED OR STAR NOSED MOLE.

We received, not long ago, a specimen of the mole tribe, accompanied with a request to give the name of the "critter." This species of mole is oftentimes found very abundant in some situations. The peculiarity in this species is the singular cartilaginous appendages to the nose, which start out like radii from the nostrils as a centre, and present a star-like appearance. Hence it is called *radiated mole*, *star-nosed mole*, *button-nosed mole*, &c. It belongs to what naturalists call the genus *Condylurus*. We believe it is a very harmless animal which burrows in the ground and feeds upon worms and bugs, and such insects as it meets with in its haunts. It probably comes out from its burrow during the night, as it is not often seen in the daytime unless disturbed by the plow or the dogs. What the peculiar design of nature is in forming the singular appendages to the snout we do not know; but they probably aid it in its search for food. Godman, in his description of animals, says the star-nosed mole frequents the banks of rivulets and the soft soils of adjacent meadows, where their burrows are most numerous, and apparently inter-

minable. In many places it is scarcely possible to advance a step without breaking down their galleries, by which the surface is thrown into ridges.

The excavations, which are most continuous, and appear to be most frequented, are placed a short distance below the grass roots, on the banks of small streams; these are to be traced along the margins, following every inflexion, and making frequent circuits in order to pass large stones or roots of trees, to regain their usual proximity to the surface nearest the water.

In a state of captivity, they feed readily on flesh, either raw or cooked, and neither seem to show any fondness for, nor willingness to eat, vegetable matter.—*Maine Farmer.*

For the New England Farmer.

INSECTS ON GRAPE VINES.

MR. EDITOR:—I have become a subscriber to the *New England Farmer*, and should like to make some inquiries through it, as they may be of some importance to the public; I have some beautiful grape vines, one about four inches in diameter, and has yielded fine fruit for several years past. Last May, when the buds began to start, I discovered that some insect was at work on them, and on looking closely, found a small, blue bug; it takes the bud as soon as it swells and eats out the centre and destroys it entirely. My vines now look as they usually do in autumn. I am afraid that it will entirely kill them; the like was never known in these parts before. If you can inform me whether it is common in any place, and what can be done to prevent them, you will very much oblige me and the public.

A WESTMINSTER FARMER.

Westminster, Vt., June 14, 1852.

REMARKS.—The rose bug has been the only enemy to our grape vines. Perhaps some of our correspondents can aid the "Westminster Farmer" in his difficulty.

WHITE WEED.

This troublesome production is sometimes known by the appellation of "Ox-eye," or "Ox-eye-daisy." It is a lover of rich deep soil, but like all troublesome plants, possesses, in a remarkable degree, the power of accommodating itself to almost every variety of soil, from the low, viscid and tenacious clays, to the lightest and most barren sands.

The plant generally matures its seed in June, and is ready to cast it before most of the grasses are in a condition to be cut for hay. As the seeds are very numerous and minute, the soil of course is pretty well replenished annually, and in consequence of this, the preponderance of the white weed over all other products soon secures it an hereditary and unalienable monopoly, which can be set aside and avoided only by force of arms, or "open revolution."

When it becomes necessary to extirpate it, the proper course is to turn it down with a deep and even furrow when in full bloom. Every head must be covered, and the land after being closely rolled, sowed with some rapidly growing crop that will stifle the pest, and prevent its again gaining a foot-

hold. Buckwheat, which has a close habit of growth, is a good article for this purpose, so also is red clover. Both of these require to be sowed thick, as it is of vital importance to occupy all the soil, and prevent the reappearance of a single plant. If the soil is rich, or if manure can be afforded to make it so, herds-grass and clover, or indeed any other kind of grass, may be cultivated; but unless there is a liberal supply of soluble humus in the soil, the buckwheat crop is preferable, as it will do better on poor soil than any other cultivated crop.

On this subject an early writer in the *New England Farmer* says:—"We find no difficulty where the plow can run without interruption. In rocky grounds it is quite troublesome, and occupies space without yielding any harvest of value. In Cambridge large fields are covered with this weed—fields that are as easily plowed as any lands in the State. They are owned by wealthy proprietors who lease them from year to year for what they can obtain in cash, and make no provision for improvement."

Ox-eye makes a good hay when cut before it becomes fully ripe; but the great objection to it with most people, is that it makes but a light crop, and on poorish lands occupies the soil without any profitable return. On many affluent soils, and where the proprietor is able to keep them in good condition by annual application of manure, there is little difficulty in securing a good, if not a remunerating crop, especially in wet seasons.

For the New England Farmer.

PRACTICAL FARMING—NO. 3.

CARROTS.

MR. EDITOR:—Considerable has been said of late in the *Farmer* about the value of carrots to feed to milch cows, and quite a difference of opinion seems to exist; and I will only say that I consider that they pay as well as any other crop, all things considered. Last year I sowed a small piece that produced at the rate of 650 bushels to the acre. I manured at the rate of 20 cords to the acre. I sowed in drills 18 inches asunder, part of them one foot apart in the drill and part 6 inches. Those that were one foot apart grew a little the largest, while those that were 6 inches, produced a little the most.

Some of them were four inches in diameter. Cost of cultivation (including manures) 16 2-3 cents per bushel. Such, sir, was the result of my experiment with carrots last year.

S. TENNEY.

N. Raymond, Me., June, 1852.

TO KEEP BUGS FROM VINES.—EDS. CULTIVATOR:—I have tried ashes, plaster, lime, road dust and tobacco juice, with some success, but a spoiled clam, the cleanings of a wool-carding machine, or a lock of wool soaked in fresh oil, placed near the root of the vine, I never knew fail—these also promote the growth of the vine. The bugs are attracted by the smell of the vine, but do not like tainted fish.—*Albany Cultivator.*

THE SAFARU PEACH.

We have procured the above cut in order to place before those who are interested in the cultivation of the Peach, as many of the best varieties as we can command. There are a few established kinds so excellent and well known, that the cultivator who intends to set only a few trees had better select those about which there is no doubt. But those wishing to enter somewhat largely into the cultivation will be glad to avail themselves of engravings and descriptions of new fruits.

The only account we have of this peach is contained in the *American Agriculturist*, in which the writer states that, "while passing a few months on Teneriffe, some years ago, I was particularly attracted by the excellence of the peaches of that island. Among those of the finest quality was the Safaru peach, which, in point of flavor, smallness of stone, abundance of juice, and beauty of form, in the opinion of the Spaniards, is not equalled by any other variety. The size, color, and general external appearance, as far as my recollection serves me, greatly resembled Rodman's navel-stone, denoted by the above cut.

"This peach is said to have originated in Spain about the middle of the IXth century, by the Arabian monarch, Abdurrahman. The envoy whom he sent to Syria for his two sisters, brought back many rarities, among which were some peaches from the gardens of Arrusafat. Being proud of

this fruit, the monarch showed it to his friends, and presented one to Safaru-bu Ulbaid, who was so delighted with its flavor, that he preserved the stone, from which he raised a tree that ever after bore his name. This variety is still cultivated in some parts of Spain, and fully merits all the praise bestowed upon it.

For the New England Farmer.

TECHNICAL TERMS.

MR. EDITOR:—Without wishing to appear fastidious, hypercritical, fault-finding or meddlesome in agricultural matters, I should like to make a few brief remarks upon the above subject.

It is well known to you, sir, and to most of your readers, that there is everywhere throughout the country a strong, wide-spread and deep-rooted prejudice in the minds of the people, against the frequent use of technical terms in explaining the science of agriculture. Would it not be well to inquire a little into the cause of this prejudice, whether it be real or imaginary, well or ill-founded; for, if we can discover its real cause, we may be able to do something to eradicate it, or, at least, to prevent its effects.

It will be generally admitted, I believe, that the use of a few old familiar technical terms is necessary,—is absolutely indispensable,—without which the science of agriculture could not be well explained or understood. These need not be here particularly mentioned. They are such as relate to the different kinds of soil, the composting of manures, and the agents employed in the production and growth of vegetables and animals. The simple use of a few necessary technical terms is not of itself alone an adequate or sufficient cause of

so general a prejudice. Something more is necessary to produce so tremendous an effect; and that is the frequent use of a great multiplicity of new and difficult terms, derived from other languages, and not always to be found in the common school dictionaries. Such terms, it will be readily perceived, are a very imperfect exponent of the writer's views to the minds of his readers. So that he entirely fails of his object, to make himself understood by his readers, and at the same time, excites a prejudice in their minds both against himself and his subject. Now the only way to remedy this defect,—to remove this prejudice where it exists, and to prevent its existence in future, is for all writers upon agriculture to abstain from the use of such terms as appear strange and incomprehensible to common readers.

I have been led to make these remarks from the following circumstance. Not long since I held a conversation with Uncle Sam, upon this very subject. Now Uncle Sam is "real death" on technical terms, learned words, and foreign idioms, whether derived from the living or dead languages. He reminds one of the late Lieut. Gov. Armstrong, who used to flare up in a moment at the mere mention of a technical term, law phrase, Latin or Greek quotation. He said that such expressions were downright pedantry, undignified, uncalled for, and a direct insult to the common sense of mankind. Uncle Sam, like the late Lieut. Gov., is an honest, straight-forward, open-hearted, strong-minded man; and if he had enjoyed the advantages of a public education, would have made a figure in the world. His principal objection to reading agricultural papers, is, that he is obliged to hold the paper in one hand, and his dictionary in the other; and then, he is not able to find out the meaning of all the words. MOUNT GRACE.

Warwick, May 5, 1852.

GROWING EARLY TOMATOES.

A friend a short time since requested me to look at a tomato patch belonging to one of his neighbors, which had been the year previous famous for the quantity of fruit produced, and its extreme earliness—by which the proprietor was enabled to sell in advance of all other competitors in the market, and thus realized as much profit from a few rods of land as some of our farmers from a hundred acres.

This plot of land was a sand knoll—the top of which had been removed to a depression near by, leaving the ground so poor that it would have been impossible to have grown any kind of cultivated vegetation except tomatoes. These were planted in hills prepared by adding a shovel full of well rotted manure to each, and the soil being of such a hot and dry nature, it brought them forward and matured the fruit directly. I have never before known this kind of fruit grown on such land, but the result in this case may furnish some hints to our market-gardeners which will be to their advantage.—*Rural New-Yorker*.

SQUASH.—As the squash is quite sensitive to cold, and the seeds frequently fail to germinate if overtaken by cold and wet weather soon after being planted, it is best to delay the planting until the weather becomes settled and the ground tolerably warm. The hills may be formed similar to

those recommended for melons. The hills should be from six to ten feet apart, each way, according to the variety cultivated. Three vines are quite enough for a single hill, and their leading shoots may be stopped, so as to induce the speedy formation of fruitful laterals. Keep the surface light and clean at all times, and draw a little soil around the stems for their support. The Autumnal Marrow is a very good variety; the Early Orange, the Acorn, the Canada and the Large Green Striped are approved varieties.—*Maine Farmer*.

REPORT

FROM THE WORCESTER COUNTY SOCIETY, ON FEEDING STOCK.

To the Trustees of Worcester Agricultural Society:

GENTLEMEN:—The committee to whom was submitted the consideration of "the best experiment in determining the advantages or disadvantages of cutting hay as food for stock, under the following regulations: A premium of \$30

"For the next best 20

"The trial to be made with at least two animals, their condition to be as much alike as is practicable; the time of trial to continue at least eight weeks, divided into periods of two weeks each. One animal to be fed with cut, when the other is fed with uncut hay, and the feed of each to be changed at the expiration of each two weeks, and so alternately each two weeks, during the trial. If any other food, than hay is given, (such as roots or meal) the same quantity to be given to each, that the result in relation to the cutting the hay, may not be affected by other food. The animals should be kept in the same stable, that they may be in the same temperature, the average degrees of which is to be stated. If the trial is made with cows, the time of having the last calf must be given, and also the weight of milk given by each cow, during each period of the trial. Each of the animals to be weighed at the commencement of each two weeks, and at the end of the trial, and the statement must give an account of their condition, age and every other circumstance that can have any influence upon the decision of the question, and that the experiment may produce the most satisfactory results, the same kind of hay, (what is usually called English hay) should be used, during the whole time; the time of giving the food and drink should be regular, and also of the milking; the time of weighing should be in the morning, and before the animal has been allowed to drink.

"The statement must also give the quantity of hay, whether wet or dry, and other food given to each animal, and of each kind during each period of the trial, and to be forwarded and received by the Recording Secretary on or before the 15th day of March, 1852, to be read before the Committee appointed, for their adjudication."

On or before the said 15th day of March a statement of a trial of feeding with cut and uncut hay, was received from Mr. Demond, of Grafton, with two dry cows; from Mr. Harvey Dodge, of Sutton, with two steers; from Mr. W. S. Lincoln, of Worcester, with two milch cows; and from Mr. A. H. Hawes, of Worcester with two working oxen.

The Committee was originally constituted by the appointment by the Trustees of Hon. George Den-

ny, Hon. John Brooks, and William A. Wheeler, Esq. After the decease of our lamented friend, Hon. George Denny, the Trustees enlarged the Committee by the addition of John W. Lincoln, Thomas W. Ward, and Charles Brigham, Esq. At the meeting of the Committee, on the motion of Hon. John Brooks, John W. Lincoln was appointed their Chairman. Subsequently the Hon. John Brooks handed to the Chairman a communication containing statements of a number of experiments made by him in relation to feeding of cattle, and for the purpose of ascertaining the quantity of solid manure voided by cattle in proportion to the weight of hay eaten by them. This communication contains much valuable information, of which the public should not be deprived, and is annexed to this report as an important part thereof, from which will be learnt the relative value of different articles of food, and the great importance, to the farmer, of making use of his hay, grain and stover as food for stock on his own land. Even those who have satisfied their own consciences by returning a load of manure for everyload of hay sold from their farm, will find that they have been robbing their land of three-fifths of the manure which of right belongs to it. Mr. Dodge, in a letter to the Chairman, states that during one of the periods of two weeks, his steers ate 508 lbs. of hay and 100 lbs. of meal, in which time all the solid manure was saved and thrown into a heap in the stable by itself; that at the expiration of the two weeks the manure was found to weigh 1136 lbs., and measured 25 bushels, potato measure.

The subject of feeding stock is of the utmost importance to the farmer, and although the books are full of recommendations of the use of the cutting machine, being the assertions of anonymous correspondents unsupported by facts, upon the particular question submitted to your Committee, they do not find that it has been discussed in the agricultural publications, or any facts stated that can have any application to it, except by inference. Of some of the most reliable statements in relation to feeding, they have made some extracts as containing information which may be useful to be understood by the farmers of our county.

In the fourth volume of the memoirs of "the Philadelphia Society for Promoting Agriculture," is a long communication from Richard Peters, entitled "Notices to a Young Farmer," he says, page 30. "Be particularly careful in expending, as you should be provident in raising, every species of provender for your stock of horses, cattle and sheep. A variety of food, and an orderly distribution of it, are more promotive of health and vigor in your domestic animals, than a lavish expenditure of any one species. Such as require previous preparation, should have it bestowed; both for profit and economy, cut or chaff your hay, straw, corn tops and blades, and even your stalks, with a powerful straw cutter; and you will save a great proportion, which is otherwise wasted, or passed through the animal, without contributing to its nourishment. One bushel of chaffed hay at a mess, given in a trough, three times in twenty-four hours, is sufficient for a horse, ox, or cow. A bushel of chaffed hay, lightly pressed, weighs from 5 to 5 1-2 pounds. A horse, or horned beast, thrives more on 15 pounds thus given, than 24 or 25 pounds as commonly expended (including waste) the usual manner of feeding in racks; to which

troughs, properly constructed, are far preferable. This practice has been now tested by experience; and the result accurately proved." The name of Judge Peters, then the President of the Philadelphia Society for Promoting Agriculture, and one of the best practical and scientific farmers of his day, would ensure to his recommendations the highest consideration, but it is to be regretted, that he has not given the facts on which his opinion was founded. Farmers are generally so much prejudiced against all information that appears in print, that they will not believe, unless furnished with all the evidence in the case, from which they may draw their own conclusions.

In the Bath (England) Society's papers, republished in the 4th volume of the *Massachusetts Agricultural Repository and Journal*, page 138, is a communication over the signature of Thomas Williamson. He says, "I have throughout the summer kept my horses in the stable, feeding them with good hay and beans. My oxen have, on the contrary, always been turned out to grass when liberated from their work; they have had the range of good pastures, and the benefit of some less valuable hay, previous to their going to their labor. My horses, five in number, have been regularly worked at the plow in pairs. The oxen, four in number, have worked in collars, drawing generally a stout Beverstone plow, or a large drag and scuffer; their labor has been constant and rather severe. As our meadows (mowing lands) began to fail us towards the end of September, owing to the quantity of stock upon them, it became necessary to allow the oxen more and better hay.

"The increased expenditure alarmed me, as the four oxen and the five horses consumed no less than four tons within one month. This caused me to prohibit the use of the hay in the racks, and to feed all the cattle with chaff; of which a boy can cut sufficient for daily use in two hours.

"My servants not only ridiculed the change, but so far as they dared, opposed in an underhand manner by various evasions and pretexts. Aided by the care and vigilance of the young gentlemen with me, the system of chaff-feeding was fully established, and the quantity needful for the horses, and for the oxen, separately ascertained.

"One hundred weight of hay was found to yield twenty bushels of chaff pressed into the measure, and piled as high as it could be safely carried; consequently each bushel weighed about 5 1-2 pounds. It was found that the five horses would eat twelve bushels of chaff during the twenty-four hours; and that the four oxen could consume an equal quantity in the same time. Ever since, the oxen have been fed with chaff only; they have very evidently improved in condition, as have also the horses, although their work has latterly been on heavier soil, and of course, more severe than formerly.

"Twenty-four bushels of chaff at 20 to the cwt. (112 lbs.) amount to about 21 1-2 tons yearly; which deducted from 48 tons (the quantity we were consuming within the year) gives a saving of about 26 1-2 tons, or more than one half.

"I have, however, carried the retrenchment further, by cutting in beanstalks, to the extent of about a quarter of the chaff. These being laid uppermost in the cutting trough, keep the hay well pressed, and cause it to be cut more regularly. Thus we now use about 25 cwt. of hay monthly, instead of four tons. It is customary in our quar-

ter to throw beanstalks under cattle, a practice which cannot be too speedily abolished. Mine had suffered much by standing out full a month in the late rainy weather, yet all my cattle ate the chaff from them alone, without hesitation; indeed, rather in preference."

On page 400 of the same volume of the *Massachusetts Agricultural Repository and Journal*, is the statement by Benjamin Hale, of the saving made by the use of the straw cutter employed to cut hay and straw as fodder for horses.

Mr. Hale was a proprietor of a line of stages then running between Newburyport and Boston. He says:

"The whole amount of hay purchased from April 1 to October 1, 1816, (six months), and used at the stage stable, was 32 tons 4 cwt. 10 lbs., at \$25 per ton, (the lowest price at which hay was purchased by him in 1816,) is... \$800.00
From October 1, 1816, to April 1, 1817, whole amount of hay and straw purchased for and consumed by the same number of horses, viz.:
Straw, 16 tons 13 cwt. 3 qrs. 10 lbs. \$160.23
Hay, 13 tons 4 cwt. 1 qr. 10 lbs. \$350.00 \$510.23
Deduct on hand April 1, 1817, by estimation, 4 tons more than there was Oct. 1, 1816, at \$25.....100
Savings by the use of a Straw Cutter 4 months of the last 6 months, or the difference in expense in feeding with cut fodder and that which is uncut... 410.23
Whole amount of hay used for the horses of the Salem stage, twenty-five in number, from April 1 to October 1, 1816—22 tons at \$30 per ton, the lowest price in Salem.....660
Whole amount consumed by the same number of horses from October 1, 1816, to April 1, 1817,—
Straw, 15 tons 13 cwt.187.80
Hay, 3 tons 16 cwt.81 \$68.80
Savings in using chopped fodder 5 months.....391.30
Total saving in using the straw cutter in Newburyport four months.....389.77
Do. at Salem five months.....381.30
Total saving in both places, average time 4½ months, \$780.97

"The member of the board of Trustees of the Massachusetts Agricultural Society, to whom the above account was communicated by Mr. Hale, was informed by that gentleman that he used no more grain from October, 1816, to April, 1817, than was used from April, 1816, to Oct., 1816."

It will readily be perceived that the large amount of saving reported in this statement is greatly increased by the extreme high price of hay, during that year of scarcity. The saving of the last six months, over the former six months, although the cutter was in use but three-quarters of the time, is 53 per cent. Much of this saving is effected by the substitution of straw for hay, and a reduction in the quantity.

The quantity of hay used in Newburyport from April 1 to October 1, 1816, is 72,138 lbs.; from October 1, 1816, to April 1, 1817, is 37,390 lbs. straw and 20,636 lbs. hay, being less in weight by 194 per cent.; and reduce the straw to its equivalent value in hay, and it would be 6129 lbs., making the whole equal to 26,765 lbs. of hay, less than of the preceding six months by 64 per cent. in its nutritive properties.

The quantity of hay used in Salem from April 1 to October 1, 1816, was 49,280 lbs.; from October 1, 1816, to April 1, 1817, was straw 35,056 lbs., and 6160 lbs. hay; whole weight 41,216 lbs., being less in weight for the last 6 months by 17 1-4 per cent., and reduce the straw to its equivalent value in hay, which would be equal to 5763 lbs., and it would then be as hay 11,923 lbs.; less in value as hay for the making of muscle by 75 3-4 per cent. for the last six months, than for the former six months.

It would be extremely difficult to conjecture how large a saving could be effected by the use of

the cutter, without a very large allowance for waste during the first period. It is probable that the grain furnished all the nutriment required by the horses, and the straw was only wanted to fill up the stomach, for which it was as useful as hay.

It is much to be regretted that in this statement of Mr. Hale, all the facts in the case are not given; the horses should have been weighed at the commencement and at the close of the term of trial, and their relative condition might have been known; the quantity and quality of the grain, and the manner in which it was given, should have been stated, that the public might have the whole evidence in the case, on which they might have formed their own opinion. It might have appeared upon more careful examination, that these horses for at least a portion of the time were overfed, and that much of the food given them passed through them in an undigested state, and of course was of no benefit to them, or in other words was wasted. It is difficult on any other conjecture to account for the great difference on the two sides of the account. It is not intended to intimate that Mr. Hale intentionally withheld any facts within his knowledge; he doubtless stated all the circumstances of which he was informed by those in his employ, and finding that his savings had been so great, he was disposed to give the public the benefit of the information, supposing it to be as full as could be expected.

This statement of Mr. Hale has been copied into many of the agricultural papers with remarks of approval, which has occasioned disappointment on the part of those who have adopted the use of the cutter and have not realized so great benefits, as by this account they were induced to expect. For these reasons, we have been disposed to examine it more particularly, that farmers might be induced fully to inquire into all the circumstances belonging to a case before they form a conclusion either for or against it.

In the *New England Farmer*, vol. 12, page 233, is the following communication.

"Beverly, Jan. 25, 1834.

"MR. J. R. NEWELL:—Dear Sir,—It is with pleasure that I comply with your request, asking the result of my experience on the subject of feeding stock. My stock consists of 51 head, viz: 8 horses, 6 oxen, 25 cows and two yearlings. This stock was fed in the usual way, with English, salt and fresh meadow hay, with meal and potatoes as their condition required, to the 1st of December last, at which time I commenced chopping my hay. In giving the result of my experiment I must in some measure ask the privilege of a Yankee, viz., that of guessing; but in this case I think I can guess pretty correctly, as much of the hay has been loaded in consequence of having to remove it from one barn to the other, and calculating the number of days a load would last, the result is as follows:

700 lbs. English hay, at \$16 per ton.....	\$5.60
200 lbs. fresh hay, at 4 " .....	.40
100 lbs. salt hay, at 8 " .....	.40
3 bushels corn meal.....	2.25
8 " long red potatoes.....	1.60

\$10.25 per day.

400 lbs. English hay chopped, at \$16 per ton..	3.20
100 lbs. fresh hay, at \$4 per ton.....	.20
100 lbs. salt hay, at 8 " .....	.40
3 bushels corn meal.....	2.25
4 " long red potatoes chopped.....	.80
140 gallons pure water.....	.00

1 man at \$8 per month.....\$1
Board of man at \$1.50 per week.....\$3

\$7.39 per day.

Balance in favor of Straw Cutter, \$2.86 per day.

In addition to the above balance may be added an increase of six gallons of milk from 25 cows then in milk, and likewise something for the improvement of the condition of my whole stock.

Yours respectfully, AMOS SHELTON."

In a communication of Finlay Dun, Jr., of Scotland, to the Highland Society of Scotland, for which he received a Gold Medal, he says in relation to the quantity of food to be given to cattle. "It is found from experience that a healthy ox consumes nearly one-fifth its own weight of hay, straw, and such other dried food. Cattle 50 stone imperial weight allowed straw *ad libitum* will consume from 150 to 180 lbs. of turnips daily." Boussingault considers as a sufficient allowance 6 lbs. of mixed food or 4 lbs. of hay, for every 100 lbs. of living weight; or otherwise, about 30 lbs. per day of a mixture of equal parts of grass and hay for cattle of 30 stone imperial weight. The food of cattle requires to be of a certain bulk. Without this, digestion and assimilation are not properly performed, even although the food be sufficiently nutritive. In order that digestion be effectually performed, the stomach must have certain mechanical stimulus, which the bulk of the food naturally imparts to it. But the quantity of food necessary to an ox must of course be greatly modified by various circumstances. It is evident for instance that young animals, in proportion to their size, require a larger quantity and a better sort of nutriment than adults. This depends upon their having to increase the size of all the parts of their frame, as well as to repair the continual waste, which is also greater in them than in older animals, on account of their taking a greater amount of exercise.

"At all ages, exercise greatly increases the demand for food, and prevents the accumulation of fat. A man, when employed in active outdoor labor, requires a much more nutritive diet, than when pursuing a sedentary occupation within doors. Working cattle also require a larger quantity and a more nutritive quality of food, than similar animals confined to courts or tied in the stall. Wild animals, and those allowed to roam about, rarely become fat. It has been remarked by Liebig, that cows driven long distances to pasture, unless they get an extra supply of food, yield milk poor in casein—the materials which would otherwise have formed that constituent of the milk being used in repairing the waste of the muscles and other parts employed in locomotion."

Professor Playfair, in a lecture delivered before the Royal Agricultural Society on the application of Physiology to the rearing and feeding of cattle, says,—"It is known that the vital forces decrease when the body is exposed to a certain degree of cold; and when this is sufficiently intense, that they are either suspended or are altogether annihilated. But the chemical force, oxygen, is condensed or increased in its power by such agencies, and it therefore now reigns triumphant. Vitality, (the cause of increase and of sustenance) being removed, chemical affinity, (the cause of waste) acts upon those tissues which have been freed from the dominion of vitality, and effects their destruction. Hence it is, that cattle do not fatten so well

in cold weather as in hot. The chemical powers being now in the ascendant, prevent the increase of mass. We know, also, that the intervention of cold weather in summer either wholly arrests, or greatly retards, the fattening of our cattle. But as the decrease of vitality has been occasioned by a diminution of the temperature of the body, it is obvious that by an elevation of the temperature, vitality would be enabled to resume its proper functions. It has been shown that the food of various countries is more or less combustible, according to the temperature of the climate; and proof was adduced that the amount of the food consumed varied also according to the temperature. The animal body is a furnace, which must be kept up to a certain heat in all climates. This furnace must, therefore, be supplied with more or less fuel, according to the temperature of the external air. If, then, in winter we wish to retain the vital functions of our cattle in a proper degree of activity, we must keep up the heat of their bodies. This we may do in two ways. We may either add more fuel (food) to the furnace, or we may protect their bodies from the cold. Warmth is an equivalent for food, which may thus be economised. But I wish to give you facts, and not assertions; and as a proof of the view I have now given you, I will cite the following experiment which was made by the Earl of Ducie, at Whitfield farm.

"One hundred sheep were folded by tens in pens, each of which was 22 feet in length by 10 feet in breadth, and possessed a covered shed attached to it of 12 feet in length by 10 in breadth. They were kept in there from the 10th of October to the 10th of March. Each sheep consumed on an average 20 lbs. of swedes daily. Another hundred were folded in pens of a similar size, but without sheds attached. They were kept during the same time, and their daily consumption of swedes amounted to 25 lbs. each. Here the circumstances were precisely similar with respect to exercise, the only difference being that the first hundred sheep had sheds into which they might retire, and thus be partially protected from the cold.

"This partial protection was equivalent to a certain amount of food, and consequently we find that the sheep enjoying this protection consumed one-fifth less food than those sheep which were left entirely exposed to the cold. In the last case the consumption of the additional food arose wholly from the necessity of adding more fuel (food) to the furnace of the body, in order to keep up its normal temperature. This was proved from the circumstance, that those sheep which enjoyed the protection had increased 3 lbs. each, more than those left unprotected, although the latter had consumed one-fifth more food.

"I wish particularly to impress upon you that warmth is an equivalent for food, and that therefore food may be economized by protecting cattle from the cold. The honey stored up by bees is for the purpose of serving as fuel to keep up the heat of their bodies during the winter. Now it has been found that when two hives of bees are placed in one hive during winter, that they actually consume less honey than each hive would have done separately. You will easily perceive the explanation of this circumstance from the facts which I have already stated. Their close contiguity prevents a rapid escape of the heat of their bodies, and consequently less fuel (honey) is required to

keep up the temperature. This case forms a very distinct proof that warmth is an *equivalent* for food.

"But I need only refer you to the results of your own experience, for every breeder of cattle must be aware, in the wintering of young stock, that they thrive better, with less consumption of food, when kept well sheltered from cold and wet."

Of the advantage in cutting hay for stock we have in this country but little evidence. The general opinion of farmers has been in favor of cutting hay, where any considerable portion was of inferior quality, especially if it was intended to feed meal with it, that the whole might be mixed together, and less would be wasted. So some experiments have been had in feeding cut hay and straw together, but the trials have not been carried out so fully as to show the advantage (if any) in cutting food for stock in the *quantity eaten*, and if any, in what it consisted. Whether it would pay to cut *good* hay, charging for the labor of doing it, is a question of which there is much difference of opinion. Some have believed that by the cutting of the hay, the digestion was aided; the animal being able to fill itself in less time, would have more leisure to chew the cud, thereby more completely extracting the nutritive qualities from the hay and derive more benefit from it. Others have contended that the animal eating the same quantity of hay would be prejudiced in having it cut—that in the eating of the long hay the saliva which assists in digestion would be more intimately mixed with the food, and more nourishment would be extracted from it. This is denied by the advocates of cutting. They claim that the gastric juice is mixed with the food when chewing the cud, and the animal having more time for that operation, would realise most benefit from its food. That there might be some slight benefit in cutting good hay, as there was less liability of its being wasted in getting a portion of it under their feet, was admitted; but it was said that this would be very inconsiderable, if the cattle were judiciously fed in small quantities and often; and it was contended that there could be no other advantage in cutting hay, than in preventing waste in some degree.

The several statements of Messrs. Demond, Dodge, Lincoln and Hawes are appended to this report, as a part thereof, from which the following facts will appear, from the statements made by them.

BY MR. DEMOND.

Cow No. 1, 7 years old, dried off about 10th December, calved 4th March, 1851, expected to come in about March 9, 1852. Trial commenced January 1, 1852—weight at commencement 870 lbs., at close of trial 931 lbs., mean weight 904 1-2 lbs., gain in 8 weeks 61 lbs., on cut hay 38 lbs., on uncut hay 23 lbs.; eat in 8 weeks 1174 lbs. hay—611 lbs. cut hay and 563 lbs. uncut hay.

Cow No. 2, 7 years old, dried off about 10th December last, calved 28th Feb'y, 1851, expected to come in about 9th March, 1852. Trial began Jan'y 1, 1852; weight at commencement 850 lbs., at end of trial 909 lbs., mean weight 879 1-2 lbs.; gain in 8 weeks 59 lbs.; on cut hay 26 lbs., on uncut hay 33 lbs.; eat in 8 weeks 1146 lbs.—560 lbs. cut and 586 uncut hay.

In addition to the hay, each cow eat 1-2 peck turnips per day, being 7 bushels to each cow,

which is equivalent to 58 lbs. hay in value, making Cow No. 1 equal to 1232 lbs., provided the turnips were the common flat turnips, and Cow No. 2, 1204 lbs., which would make their daily food, as in hay, equal to 29-20 per cent. of their live weight, or an addition of 1 lb. in weight for every 20 3-10 lbs. hay, or its equivalent eaten.

BY MR. DODGE.

Near Steer, 3 years old this spring. Trial commenced Jan'y 3, 1852—weight at commencement 1075 lbs., at close of trial 1125 lbs., mean weight 1100 lbs.; gain in 8 weeks 50 lbs., on uncut hay 55 lbs., loss on cut hay 5 lbs.; eat in 8 weeks 916 lbs. hay—447 lbs. cut hay and 469 lbs. uncut hay.

Off Steer, of the same age; trial began at the same time, weight at commencement 1080 lbs., at close of trial 1160 lbs., mean weight 1120 lbs.; gain in 8 weeks 80 lbs.—on cut hay, 75 lbs., on uncut hay 5 lbs.; eat in 8 weeks 949 lbs. hay—469 lbs. cut and 480 lbs. uncut hay.

During the 8 weeks each steer had 2 qts. meal per day, which is equivalent to 293 lbs. hay, making for near steer equal to 1209 lbs. hay, and for off steer equal to 1242 lbs. hay—their daily consumption of food was in hay equal to 2 per cent. of their live weight, or 1 lb. in addition of weight to every 18 85-100 lbs. of food equivalent to hay eaten.

BY MR. LINCOLN.

Cow Beauty, 4 years old 13th May, 1852, calved 14th June, 1851, in milk, expected to have another calf June 30, 1852. Trial commenced 9th Jan'y, 1852; weight at commencement 905 lbs., at close of trial 1030 lbs., mean weight 967 1-2 lbs.; gain in 8 weeks 125 lbs.—on cut hay 100 lbs., on uncut hay 25 lbs.; eat in 8 weeks 1354 3-8 lbs.—685 7-8 lbs. cut and 668 1-2 lbs. uncut hay.

Cow Cherry, 4 years old this spring, calved on the 20th June, 1851, in milk, expected to have another calf 14th May, 1852; weight at commencement of trial Jan. 9, 1852, 815 lbs., at close of trial 850 lbs.; mean weight 832 1-2 lbs.; eat in 8 weeks 926 3-4 lbs.—464 1-8 lbs. cut hay and 462 5-8 lbs. uncut hay; gain in 8 weeks 35 lbs.—30 lbs. on cut hay and 5 lbs. on uncut hay.

In addition to the hay each cow eat 648 lbs. carrots, equal to 171 lbs. hay, which would make for Beauty equal to 1525 3-8 lbs. hay; for Cherry 1097 3-4 lbs. hay; in the meantime Beauty gave 413 3-8 lbs. milk—229 lbs. 4 1-2 oz. on cut hay, and 184 lbs. 1-2 oz. on uncut hay; Cherry gave 442 lbs. 15 oz. milk—209 lbs. 13 1-2 oz. on cut hay, 233 lbs. and 11-2 oz. on uncut hay; the daily food of Beauty was equivalent to 2 8-10 per cent. of her live weight; Cherry to 2 4-10; the gain of the two cows was 1 lb. of flesh for every 16 31-100 lbs. of food equivalent to hay eaten.

BY MR. HAWES.

Near Ox, 6 years old this spring, trial commenced 15th December, 1851; weight at commencement of trial 1520 lbs., at close of 8 weeks 1646 lbs., at close of 11 weeks 1628 lbs.; mean weight for 8 weeks 1583 lbs., 11 weeks 1574 lbs.; gain in 8 weeks 126 lbs.—120 on cut and 6 lbs. on uncut hay; gain in 11 weeks 108 lbs.—122 lbs. on cut hay, and loss on uncut hay 14 lbs.; having eaten in 8 weeks 2106 lbs. hay,—1078 lbs. cut and 1028 lbs. uncut hay; in 11 weeks 2925 lbs. hay,—1351 lbs. cut and 1574 lbs. uncut hay.

Off Ox, of same age, and time of trial same;

weight at commencement of trial 1500 lbs., at the close of 8 weeks 1604 lbs., at end of 11 weeks 1617 lbs.; mean weight for 8 weeks 1552 lbs., for 11 weeks 1558 1-2 lbs.; gain in 8 weeks 104 lbs.—on cut 17 lbs., on uncut hay 87 lbs.; gain in 11 weeks 117 lbs.—on cut hay 32 lbs., on uncut hay 85 lbs.; having eaten in 8 weeks 2106 lbs.—1028 lbs. cut and 1078 lbs. uncut hay; in 11 weeks 2925 lbs.—1574 lbs. cut and 1351 lbs. uncut hay.

The daily food of these cattle has been in hay about 2 4-10 per cent. of their live weight, or 1 lb. in addition of weight to every 18 26-100 lbs. of hay eaten.

The eight animals with which the before mentioned trials were made, eat in 8 weeks 5343 lbs. cut hay, 261 lbs. equivalent—5604 lbs., and gained in weight 401 lbs., or 13 97-100 lbs. hay to 1 lb. in weight gained; 5335 1-3 lbs. uncut hay, 261 lbs. equivalent,—5596 1-3 lbs., and gained in weight 239 lbs., or 23 41-100 lbs. hay to 1 lb. in weight gained. Greater gain on cut hay than on uncut hay by 68 per cent., and only 7 7-8 lbs. more cut hay consumed.

Mr. Lincoln's two cows eat 1150 lbs. cut hay, and gave 439 1-8 lbs. milk; eat 1131 1-3 lbs. uncut hay, and gave 417 1-8 lbs. milk. Greater yield of milk on cut than uncut hay 22 lbs., or 5 9-20 per cent., and only 18 7-8 lbs. cut hay in addition consumed.

These experiments seem fully to have established the fact that a much greater benefit is derived from cutting *good* hay, as food for cattle, than an equivalent for the expense of cutting; if obliged to hire labor for that purpose. These experiments were made under unfavorable circumstances. It is understood that the cattle were unused to eat *cut* hay, and although some of the cattle eat the cut hay readily, by the greater part it was refused until hunger induced to the consumption of it. Another objection—the term of each separate trial was too short; if the whole trial was to have continued but 8 weeks, it would have been better to have divided into 2 periods of 4 weeks each, than into four periods of 2 weeks each. There was a loss at each time of changing the food, by a part of the cattle not eating it so freely. It is now become manifest that the cutter can be profitably employed in chaffing hay, whether the whole be good, or a portion of inferior quality, straw, cornstalks and butts. Of the latter, cornstalks and butts, they are believed to be intrinsically of more value, than they have usually been estimated; when properly cured, they afford very nutritious food, of which cattle are fond, and if passed through a cutter, very little will be rejected. If the stalks and butts be not of a good quality, it will still be expedient to cut them, the cattle will eat a larger proportion, and what is refused by them will be more readily decomposed. Those who have been compelled with much hard tugging and pulling, to shovel over manure in which uncut cornstalks and butts have been mixed, will readily admit that the use of the cutting machine would have saved them much hard work, so much so as well to pay for the labor of cutting the stalks and butts.

[TO BE CONTINUED.]

☞ A man's owning a large farm is no excuse for imperfect tillage. What he cannot improve, he need not undertake to cultivate.

MULCHING.

The only definition given to this word by Webster is that of "*half rotten straw*"—and even this he takes from Bailey's old dictionary. At the present day it has a wider significance, and we believe that farmers and gardeners attach to it the same meaning in all parts of the country. The application of any substance about trees or plants to prevent a too rapid evaporation of moisture from the soil, and protect the tender roots from our fierce summer suns, is called *mulching*. In Worcester's dictionary we do not find the word. Its meaning, however, is now well established without the aid of any learned lexicographer.

Mulching, in our climate, is a most important operation. It may be done with meadow hay, straw, saw-dust, tan, chips that have been heaped and quick lime sprinkled among them, grass cut from the lawns or borders, leaves, or even bits of board, will pretty well answer the purpose. Where there are so many things to select from, persons in all situations will be likely to find something that will answer their purpose.

Those having machines for cutting hay and straw will find that by cutting these materials, they will get something admirably adapted for placing among strawberry plants. For trees and large plants, larger and coarser materials answer quite as well.

Young trees, tomatoes, strawberries, egg plants, currant and gooseberry bushes, cabbages, and nearly all the garden plants, may profitably be mulched. A more even temperature and state of moisture is preserved, weeds are kept under, and the plant is enabled to keep steadily growing. The surface soil is kept open and porous, and the whole process renders all things favorable to a free and luxuriant growth.

If the use of the word seem proper to you, and you become as well convinced of the importance of the operation as we are, you will straightway go and *mulch*.

For the New England Farmer.

THE BEST LOCATION FOR PEACH TREES.

Although the season for transplanting fruit trees has passed, the present condition of the *peach* in this vicinity so fully confirms the views of observing and practical horticulturists as to the best location for them, that it may be well to put them on record for the guidance of future operations. I have three acres in peach trees, about one-half of which are situated on low, plain land, and the other half on a high hill in the immediate vicinity. My trees on the low land have been injuriously affected and many of them entirely destroyed by the severity of the past winter, while those on the hill, occupying a bleak and exposed position, never looked more finely, and are now in full blossom. The popular impression is, that plain lands, with a somewhat sandy soil, are the best adapted to peach trees. and that they cannot live at all on

the bleak and ragged eminences, which form so large a portion of every New England farmer's domain. But this is one of the numerous cases where the popular belief, in horticultural matters, is at variance with the well established results of close and scientific observation. The peach loves an elevated locality, and one nearly as rough and rocky as the vine luxuriates upon on the banks of the Rhine. It requires a soil of considerable strength, and if it has a clayey subsoil, so much the better. My own observation and experience also go to overthrow the vulgar belief, that *highly manured* grounds are the most favorable to the peach. A part of my peach orchard occupies ground, which has for half a century been used as a garden, and which has been liberally manured. The consequence is, that there is an excessive growth of wood, and a consequently diminished product of fruit. Such a liberal application of manure is a sort of forcing, hotbed process, which gives the tree a luxuriant growth, but diminishes its capacity for fruit bearing. The peach tree requires a *cultivated* soil, and indeed it is preposterous to think, as many do, that it will flourish in sward land, even if the soil be ever so good. The soil about peach trees needs to be thoroughly stirred by the plow and the hoe, at least as often as every other year, or they will do little or nothing. Plant your peach trees then on your hills, and among the rocks where there is a good depth of soil, and let the soil be frequently stirred, and enjoy only a slight quantity of manure, and you will find that they will successfully resist the severity of our winters, load your table with most luscious fruit, and enable you to send to market an article which is always in demand, and which will amply repay your toils for its production.

May, 1852.

WALTHAM.

SOURCE OF THE NUTRITIOUS PROPERTY OF VEGETABLES.

The nourishing property of corn, wheat and other grains, is owing to the gluten contained in them. And this gluten consists, in great part, of nitrogen. It is of course an important object with the farmer, to increase the proportion of gluten, and that is done by supplying additional nitrogen in the aliment of the plant. Carbonic acid and water are the chief sources of *growth*. Nitrogen is the principal element constituting the nutritive quality. The atmosphere contains a large quantity of nitrogen. It is not supposed to be taken up by vegetables, however, from the atmosphere, in its simple form, but, by combination with hydrogen, in the form of ammonia. By the digestion of the ammonia, the nitrogen is afterward separated in the plant and used to constitute the peculiar product, gluten, to which its nutrition is owing.

Ammonia is produced by the decay of most animal substances. In this way it is that the application of manures is so beneficial to plants;—by the supply of ammonia furnished, which being digested in the plant, results in a separation of nitrogen, which enters in the tissues of plants and produces their nutritive quality.

Ammonia is readily absorbed by water, and the

rain and dew becomes impregnated with it, and it is thus administered to vegetables, in small quantities. This may be sufficient for their existence and ordinary growth. But a greater supply of ammonia is necessary to some plants on account of their peculiar economy. This is the case with all plants containing much gluten. And this substance may be greatly increased by a liberal supply of manures from which ammonia is more abundantly provided. These plants can therefore only be cultivated advantageously by a free application of manure, or otherwise an equivalent provision of ammonia in another form. Corn ordinarily, when raised in vegetable mould, contains nine and a half per cent. of gluten; but raised on land manured with blood or urine, has been found to contain thirty-five hundredths of gluten.

Gypsum has the quality of absorbing ammonia from the atmosphere, and yield it again to water which may soak through it. This is the mode in which gypsum has a beneficial action on vegetation, while the gypsum itself held in solution in water is considered to be injurious.

For the New England Farmer.

CISTERNS.

MR. EDITOR:—In a late number of the *Farmer*, Mr. B. H. Howard asks for information about cisterns. Such as I have I will give him, and the readers of your valuable paper.

The following table will give the contents of different sizes.

34 feet diameter will hold for every 10 inches in depth,	- - - - -	59 gallons.
4 feet diameter,	- - - - -	78 "
44 " "	- - - - -	99 "
5 " "	- - - - -	122 "
54 " "	- - - - -	148 "
6 " "	- - - - -	176 "

You will find by this table that a cistern 6 feet deep and 6 in diameter will hold 1260 gallons, and each foot you add to the depth will hold 210 gallons. Therefore, one 10 feet deep and 6 in diameter will contain 2100 gallons.

I have one in my house cellar, entirely below the bottom of the cellar, 64 feet deep and 54 in diameter, holding about 1000 gallons. It was dug 6 feet 8 inches deep and 7 feet in diameter. The bottom being made smooth, was laid over with brick. The mason then began the side with brick laid in cement, leaving a space all round between the brick and earth about 5 inches. After raising the work about 18 inches, he carefully filled the space between the brick and side of the hole with earth, well and carefully pressed down. If you wet the earth or clay as you fill it in, it will be more compact.

When you get within about two feet of the top, commence gradually to draw in the work towards the centre, leaving, when finished, a space open about two feet across. The next thing is to plaster the inside with cement; also, the top on the outside, commencing where you began to draw in. About two courses of brick are laid round the mouth of the cistern, forming a neck which adds to the strength of the top. Now cover the whole

with earth except the neck. The water is conducted to my cistern through a small brick drain laid in cement. I also have a drain near the top, to let off the surplus water. If a cistern is made out of doors, it must be below the reach of frost. Lead pipe would probably be cheaper than brick, to conduct water to and from the cistern.

I have no doubt but that a cistern made this way of hard brick would last a century. Mine, holding 1000 gallons, cost \$18.00. The larger the size, the less the cost in proportion to the capacity. If the earth is firm and hard, you may lay the brick close against it, thus saving the trouble of filling in and digging so large.

Amesbury, May 10.

DANIEL BLASDELL.

P. S. I have known them made by cementing directly on the earth, using no brick, and covering the top with timbers or plank. One made with brick will cost more, but I think it best and cheapest, taking into consideration safety and durability.

REMARKS.—The information contained in this communication is valuable. Thousands of people who are scrubbing in, and scolding about, hard water, would be glad of a cistern, if they knew how large an one they require, and something about its cost and how to make it. They need not be expensive, as the labor of digging and carting away the earth may usually be performed without paying out cash. The water may be conducted from the roofs of the buildings and passed through one or two filtering casks filled with alternate layers of sand, charcoal and pebbles, and thus become the purest and best water for family use.

CASTOR OIL FOR LIGHT.

Some weeks since a correspondent inquired through the *Farmer* whether the castor bean could be raised in New England so as to afford a profitable light from the use of its oil. Our friends of the *Valley Farmer*, published at St. Louis, very kindly replied to the queries propounded, and we now give below their illumination of the subject:

"We will just inform our worthy brother that Providence has placed it out of the power of the farmers of New England to grow the castor bean. It is the slowest to mature of all the leguminous plants, and the easiest killed by frost, consequently it will not do north of latitude 39 or 40. Our 'Egypt' (Southern Illinois) is the home of the castor bean, but there is corn there too, (and that's the reason why its called Egypt,) and corn made into pork, and thence rendered into lard oil, is a more economical light than castor oil, and not half so gummy. No, no, brother Yankee, you are pretty bright down there, but you can't *shine* in the castor bean line."

MASS. HORTICULTURAL SOCIETY.—There was a fine display of the early flowers, on Saturday last, at these rooms, outvied, however, by the array of beauty which had flocked into the hall to examine them. Popular as the society is, it is somewhat strange that out of this vast and intelligent population, larger numbers do not visit these rooms.

Flowers are the angels of the trees, everybody loves them and feels their influence. There were also at the rooms three specimens of apples presented by J. B. MOORE, of Concord,—the Baldwin, Hunt Russet, and Winter Sweet, all as fair and beautiful as when plucked from the tree. Some fine-looking Black Hamburg and other grapes were also on the tables.

For the New England Farmer.

MOUNT AIRY INSTITUTE.

MESSES. EDITORS:—In the month of October last I inquired through your journal, if there were any *Agricultural schools* in this country, and if there were, by whom governed and where situated; to which you kindly replied that if there were, they were not known to you. You also replied, that there had been one at Mount Airy, Pa., and requested the editor of the *Germantown Telegraph* to reply; he, however, overlooked your article (as I have learned since I arrived here,) and hence it was not answered, as it would have been had he seen it, for he is acquainted both with the Institute and Prof. Wilkinson, its principal.

By mere accident I learned the address of Prof. W., wrote him, and received the circular of the Institute.

I found in it just what I had long been looking for; accordingly I set out on the 1st inst., to go and see for myself. I have now been here nearly a fortnight, and have participated in numerous branches of the farm work for the season, have commenced the course of study here given, and am ready to admit, that the fault will be my own if I do not here acquire the knowledge, both practical and scientific, that will insure my success as a farmer, which I am determined to be.

The Institute, as its name implies, is situated on the summit of Mount Airy, Germantown, Pa., 7 miles distant from the Exchange, in the city of Philadelphia. Its location is proverbial for its healthiness, and is in a most delightful section of country.

Connected with the institution there are about seventy acres of tillable land, with extensive buildings, fruit and ornamental nurseries, green-house plants, &c. &c., together with the most approved agricultural implements now in use.

Agriculture, chemistry, zoology, physiology, entomology, natural philosophy, mathematics, &c., are thoroughly taught.

"Particular attention is given to the following subjects, viz.: The rotation of crops best adapted to the different soils and climates; breeding, feeding and training animals for labor, and milking; the management of the dairy and swine; the comparative value for food of the different grains, roots, grasses, &c.; selecting and fattening animals for slaughter; slaughtering and curing meats; preserving, composting, and applying manures; fertilizing with green crops, &c. &c."

"Two evenings of each week are devoted to the discussion of all matters pertaining to the farm, for which 'Farmer's Club' meetings are held, notes made on the discussions, and recorded in the journal which each student is required to keep for the preservation of a replete account of the experiments and operations of the farm."

Among the many new and interesting matter

in use here, are a very cheap and correct rain-gauge, by which we find that 346-100 inches of rain have fallen during the last ten days—India rubber springs under the farm wagon—iron troughs for the hogs—a draining machine for pressing surface water furrows in newly seeded land—frame harness for oxen—a bull made to work in the shafts of the cart like a horse, also a railway horse power for cutting fodder, &c. &c.

When I have had time to become competent to judge of the merits, I will give a more minute description of each.

On the morning of the 7th inst., the ground was covered with snow, when we sowed the land designed for corn, and that in Lucerne, used for soiling, with Peruvian guano compost, 350 lbs. of the pure guano per acre, sown on the snow; the object of which was that we might see when we sowed it scantily, and that we could, by seeing the substance sown after it fell to the ground, more readily discern our defects in sowing. This I thought a capital idea. The compost was 1 bushel guano, 2 do. fine charcoal and 1-8 do. gypsum. The coal is damp, and when mixed with the guano, makes it free from dust, and much more pleasant to sow.

Hoping that you will pardon me for troubling you with so much and yet so little, I am, sir,

Very respectfully yours,

G. TILLINGHAST HAMMOND.

Mount Airy Agricultural Institute.

Germantown, Pa., April 12th, 1852.

REMARKS.—We shall be glad to hear from our friend again.

For the New England Farmer.

DEEP PLANTING OF TREES.

BY MARSHALL P. WILDER.

MR. EDITOR:—I cheerfully respond to the request of your correspondent, H. F. H., in relation to DEEP PLANTING. I concur fully in his maxim, "*better too shallow, than too deep*," and also agree with him that more young trees are killed from too deep planting than from any other cause.

With the quince, the willow, and all trees, however, which root readily from cuttings or layers, the dangerous results of deep planting are obviated from the fact that these emit roots, however deeply planted, nearly up to the surface of the soil, where their food is assimilated to their wants by light, heat and atmospheric influences.

Pear trees, therefore, which are grafted on the quince, and are planted "*deep enough to bury the quince stock entirely below the surface of the ground*," will not be considered as *deeply planted*, when it is remembered that, under good cultivation, the quince will furnish itself with new roots up to its junction with the pear.

In the discussion to which your correspondent alludes, I could not of course enter into all the details of cultivation, without transcending the limits allowed to any one speaker. I however took it for granted, that a common sense view of the subject would lead the practical man to the conclusion, that the pear should be grafted as near the quince root as possible; and we would by no means recommend the selection of trees which are worked "six or eight inches" above the quince root. When it has been our misfortune to receive from Europe

dwarf trees grafted thus high, we have uniformly planted the whole quince stock under ground.—But to counteract the deleterious effects of too deep planting, we have transplanted the trees, after an upper course of roots had been formed, at the same time removing the long shank with the lower and now inactive roots.

The principal advantages of the system we have adopted are, that the quince stock, which is naturally hard and rigid, becomes moist and emollient when covered entirely in the soil, thus allowing it to swell up evenly and progress symmetrically with the pear stock. In this way it is also protected from the depredations of the borer, and when the variety is well adapted, the pear stock frequently sends forth roots, thus securing the double advantage of early bearing and increased health and vigor in after years.

Yours, &c.,

M. P. W.

Dorchester, May 24, 1852.

THE SMALL POX.

FRIEND ROBINSON! allow us to congratulate you upon your escape from the clutches of this "ugly customer." Shakspeare said truly, "there's good in every thing"—if you had not been smitten, you had not given us the valuable recipe below, nor should we have had the benefit of "Capt. Johnson's" experience, or the philosophy of "getting round the corners." Now that "Richard's himself again," may he have prosperous gales, a good appetite and easy digestion.

Get from the apothecary, a little vial of stuff called "liquid cuticle," and as soon as the pustules are fully formed, apply a little of the liquid with a little brush or feather, to each one. As fast as they get ripe, remove the scab and wipe away the matter clean and apply the liquid again. If any of them fill a second time, you must remove the covering and repeat the process. It will smart like fun for a moment, but my word for it, when you recover, you shall not find a mark upon that pretty face of yours to prove you ever had the disease.

I am told the article is made of gun cotton, dissolved in chloroform. It forms an artificial skin over a wound, just as good as the real one. It is a valuable remedy, and I expect the ladies' department of the *Plow* will become immensely popular for making it public. I think the manufacturers of the article ought to send the editor a sufficient supply to give every lady subscriber a bottle, for this gratuitous puff.

Be Vaccinated.—If you have been, be so again, for it will protect you for a long time, but must be renewed. It protected me for forty-eight years, and as ladies never reach that age, they will be safe if vaccinated.—*Plow.*

CATERPILLARS.—These creeping gentry were made for some good purpose, undoubtedly; but outrage all our notions of propriety by feeding upon and denuding our fruit trees. This is the season for them to appear, and we recommend to every person who objects to their proceedings to be after them early in the morning with brush and pole, fingers and feet, or in any other way which shall effectually put a stop to their depredations.

HEALTH—GARDENING—TOOLS.

How much, suppose you, kind reader, is expended annually by the people of these States, in running to watering-places by persons in the cities, seeking health and amusement, and by persons in the country making their annual visits to the city to catch the fashions and enjoy a few days' excitement amid strange scenes and modes of life! The sum would unquestionably be enormous, while the utility of such a resort, taking morals into the account on one hand, and the loss or waste of time on the other, is somewhat doubtful.

It is certainly a partial loss, when time is devoted to a particular object in the pursuit of health and amusement, if that time might be given to some useful employment in which health and spirits would be promoted in an equal or greater degree, and at the same time some profit gained.

Men seek these places of resort as their only refuge from the dust and toil of the city; but they come "like angel's visits, few and far between," and do not, after all, answer the purpose desired. They need some *daily* call, to turn them from their pressing cares, some balm for the agitation of politics or commerce, or mechanic life; some cheap, attractive, and yet useful and profitable amusement.

It seems to us that nothing will satisfy this want like a *Garden*. We have often spoken in these columns of its beauty, its home-attractions and moral influence. Its profit will soon be manifest to him who cultivates it. Then the modes of communication are so frequent and rapid, that it is convenient and cheap to live in the country, and nearly every man who desires it may obtain a rood of land, where his leisure hours can be occupied in the midst of his family, and where he could cultivate the graces in his children, while cultivating his plants. This occupation would come daily, make no demands upon the purse for traveling expenses, hotel bills, porters and other extras, but on the contrary bring health, calm and contentment, and spread the table with bountiful supplies of wholesome nutritive vegetables.

Looking at the convenient arrangement and beautiful collection of GARDEN IMPLEMENTS exhibited in a collection gathered in a chest, suggested these reflections:—To enjoy garden or farm operations, one must have good tools to work with. In this collection we find the pruning saw, chisel and hook, with screw-pointed handle; the hoe, rake and scuffle; the tree-scraper, pruning-scissors and knife, vine-scissors, budding-knife, flower-gatherer, hammer, twig-cutter, grass or hedge shears, weeding fork, transplanting and weeding trowel, a garden reel and floral hoe-rake!

Shades of the "Old Gardeners," if you could see these, you would sigh for your old haunts again. Who is there that ever plucked a rose or dug a potato, that would not be attracted to the delightful

employments of the garden by such a display? But we will only stop to say that this chest may be found at the warehouse of Messrs. Ruggles, Nourse, Mason & Co., Quincy Hall, Boston. We will add this, however, CULTIVATE A GARDEN—tool chest or not.

For the New England Farmer.

THE MOTHER APPLE.

BY CHARLES SIEDHOF.

This apple, a representation of which was given in the *New England Farmer* a few weeks ago, is a native of Bolton, about two miles from here. I never have seen it, but being so highly spoken of by such as know its value, it attracted my attention. The original tree is still growing; I was informed it was to be found on Mr. Theodore Gardner's farm in Bolton. On April 1st I set out, in the afternoon, with one of my pupils, for Bolton. I called on Mr. Gardner, who was very kind and obliging. He had sold the farm on which the tree in question is still growing, but he accompanied me there, and pointed the tree out, from which he cut me a few scions, being aware of the great interest I manifested in it. The apple was formerly known by the name of *Gardner's apple*. It being the only apple Mr. Gardner's mother liked, the children picked and preserved yearly the whole crop of the tree for her. This caused its present name, *Mother apple*, i. e., *mother's apple*, as the children of Mrs. Gardner used to call it. The tree stands in the yard between the house and woodshed. The house is the last in the village of Bolton, on the road to Stow, right hand side.

The Mother apple is said to be an abundant bearer. It is by many much preferred to the Hubbardston Nonsuch. It keeps till February, but is in eating from October.

Lancaster, Mass., April 16, 1852.

WHERE DOES WOOD COME FROM, OR WHAT ARE TREES MADE OF?

If we were to take up a handful of soil and examine it under the microscope, we should probably find it to contain a number of fragments of wood, small broken pieces of branches, or leaves, or other parts of the tree. If we could examine it chemically, we should find yet more strikingly that it was nearly the same as wood in its composition. Perhaps, then, it may be said, the young plant obtains its wood from the earth in which it grows. The following experiment will show whether this conjecture is likely to be correct or not. Two hundred pounds of common earth were dried in an oven, and afterwards put into a large earthen vessel; the earth was then moistened with rain water, and a willow tree weighing five pounds, was planted therein. During the space of five years, the earth was carefully watered with rain water. The willow grew and flourished, and to prevent the earth being mixed with fresh earth, being blown upon it by winds, it was covered with a metal plate full of very minute holes, which would exclude everything but air from getting access to the earth below it. After growing in the earth for five years, the tree was removed, and on being weighed, was found to have gained one hundred and sixty-four pounds. And this estimate did not include

the weight of the leaves, or dead branches, which in five years fell from the tree.

Now came the application of the test. Was all this obtained from the earth? It had not sensibly diminished; but, in order to make the experiment conclusive, it was again dried in an oven and put in the balance. Astonishing was the result—the earth weighed only *two ounces* less than it did when the willow was first planted in it! yet the tree had gained *one hundred and sixty-four pounds!* Manifestly, then, the wood thus gained in the space of time was *not* obtained from the earth; we are therefore compelled to repeat our question, “where does the wood come from?” We are left with only two alternatives; the water with which it was refreshed, or the air in which it lived. It can be clearly shown that it was not due to the water; we are consequently unable to resist the perplexing and wonderful conclusion—it was derived from the air.

Can it be? Were those great ocean spaces of wood, which are as old as man's introduction into Eden, and wave in their vast and solitary luxuriance over the fertile hills and plains of South America, were all these obtained from the thin air? Were the particles which unite to form our battle ships, Old England's walls of wood, ever borne the world about, not only on wings of air, but actually as air themselves? Was the firm table on which I write, the chair on which I rest, the solid floor on which I dwell, once in a form which I could not as much as lay my finger on, or grasp in my hand? Wonderful truth! all this is air.—*Exchange.*

For the New England Farmer.

A PEACEFUL WORK.

FRIEND BROWN:—As you and my old friend FRENCH are now associated with a much loved relative of mine, in the noble work of improving the agriculture of New England, and elevating and purifying the moral and intellectual condition of the industrial portion of the community in general, and of the farmers in particular, I have been thinking I should like occasionally to join your company, and contribute my mite towards the accomplishment of the end proposed.

The political press aims at controlling the masses, and shaping them to its ends,—and its conductors, what satisfaction can they derive from a review of the course over which they have passed—of the means to which they have resorted—or the ends which they have reached, even when they have been successful? But you—you are telling simple truths, in the most direct and earnest way, in the kindest spirit, and with the best intentions. You are aiming to promote domestic peace and comfort, social enjoyment, industry, economy and every virtue. You awaken no jealousies, you kindle no hatreds, you plant no roots of bitterness, and when you review your labors you do not see the peace of society disturbed, bitter animosities ranking in the minds of men, and discontent and envy pervading the community, as the result, directly or indirectly, of your work. But you behold broad fields growing broader, green fields growing greener, “two blades of grass growing where but one grew before,” the fruit of the earth increasing in variety, in size and richness, domestic conveniences and comforts rapidly increasing, implements of labor everywhere mul-

tiplied and improved; you see on every hand the spirit of invention, of progress, at work; brute force guided by science and skill, and results achieved, which a few years ago would have been deemed incredible; and you feel that you are identified with it all, that you are laboring to promote it all, that if it is not all your work, yet that you, co-working with others, have brought it all to pass.

You can lay your head upon your pillow at night with the consciousness that you have slandered no man, misrepresented no rival, perverted no truth, and put forth no effort or ingenuity to make “the worse appear the better reason;” but at peace with all the world, and with a kindly feeling towards even the beasts of the field, and the fowls of the air, you can commit yourself and all that is dear to you to the protecting care of the Common Father, and sleep in quiet until the birds, carolling forth the praises of their Maker from the fulness of their glad hearts, awake you from your slumbers.

If you are not among those who are turning the world upside down, yet the genial dew of your influence goes forth to fertilize the soil—and to quicken into life in the minds of thousands, intellectual and moral germs, which, developed by the culture that perhaps originated in words spoken by you, shall yield rich harvests, not only for themselves, but for the world. But though you are cheered by the consciousness that you are doing good, and by the faith that happy results always follow good thoughts, good words and good acts, yet you need all the patience of that charity which casts its bread upon the waters, relying upon the promise that he shall find it after many days. Indeed, we cannot expect to see any great and marked results follow in the immediate wake of any reformatory measure. He must be contented with a slow and gradual growth even of that which is good, so that the principles on which it rests may be understood, and incorporate themselves with the habits and the feelings of men. Thus the slow growth of the oak enables its roots to strike deep, and take a firm and enduring hold of the soil. This seems to be the order of Providence; and thus any sudden changes that do great violence to the established feelings and usages of men, however well intended, are of doubtful utility. Reformers would do well to remember this, if they would not have their work to do over again.

My dear sir, when I took up my pen, it was with the intention, after a short preamble, to say a few words on another subject; but I have run on almost unconsciously, until I perceive that it would be quite unconscionable to say more at this time; and I will close with an intimation, that for the sake of renewing old acquaintance and having a chat with old friends, I may send you now and then a short article, if it will be acceptable.

Yours, &c.,

J. R.

Gloucester, May 24, 1852.

REMARKS.—This communication from an old friend is received in thankfulness—may many others follow it. We are aware that “all are not Israel who are of Israel,” and suppose it is so with political parties. They are not all patriots who talk loudly of the virtues of patriotism upon

the stump! Yet, we think well of the large mass of political parties, whose "sober second thought," as Fisher Ames, (not Van Buren) our own honored son, said, in the Massachusetts convention upon the adoption of the Constitution of the United States;—the sober second thought of these masses will bring matters right; at least, such is our faith in the people.

But we agree with our friend, that the pursuits of rural life are far less exciting, and present far less temptations to fruitless ambition and corroding care, than political pursuits. There is no condition in life, in our opinion, so highly favorable to the full development of high character, the perfect man, as that of the agricultural community. In that, the moral powers occupy a higher scale than in most others, while the intellectual, perhaps, are less prominent. It becomes us, then, to raise these, and then we present not only the most perfect man, but the most perfect community, and nation.

Our friend's views of the position and influence of farmers are liberal and just, and their expression will afford encouragement to them as it does to us.

For the New England Farmer.

SIMPLE RULES,

FOR LAYING OUT GIVEN SURFACES.

These can be of little use to the surveyor, but may be of utility to refer to, especially to those who are not versed in the surveyor's art. In landscape gardening and rural embellishments a few such rules are often indispensable. In measuring land surfaces, the chain of two or four rods is used. A proper chain is 4 rods, or 22 yards, or 66 feet, or 100 links (of 7.92 inches) in length; and a square chain contains 16 square rods, or one-tenth of an acre. A wooden rod 16 1-2 feet in length, or a tape or rope of the exact length 16 1-2 feet may likewise be used. The square acre contains 160 square rods, or 10 square chains, (of four linear rods each.)

To lay out an acre in the form of a square, measure one way, (say north,) 12 rods and 16 2-10 links, or 12 rods and 10 7-10 feet; then measure at right angles to this, (say east,) the same distance. To lay out the same in form of an oblong, measure one way 20 rods and the other 8, or so that one side multiplied by the other shall equal 160.

To lay out, 1st, an acre, 2d, one-fourth acre, 3d, one-eighth acre, in the form of a circle:—

1. Fix a centre, and with a rope (radius) 7 rods and 3 3-8 links in length, trace the circle (of one acre) on the ground.

2. For 1-4 acre, use a measure 3 rods and 14 links in length.

3. For 1-8 acre, use a measure 2 rods and 13 links in length.

To lay out, 1st, an acre, 2d, one-eighth acre, in the form of an equilateral triangle:—

1. Make each side of the triangle 19 rods and 5 1-2 links in length for an acre.

2. Make each side of the triangle 6 rods and 20 links in length for 1-8 acre.

A plot of ground may be laid out having the form of an ellipse or oval, in the following manner, viz.: Set three stakes, not in a straight line, but say at the three corners of a triangle. Around these stretch a rope or cord. Then take away one of the stakes, which stake move along against the rope, keeping it tight, and it will trace out an ellipse.

If proper, I will send some simple rules for surveying land and for multiplying chains, links and rods, &c., with remarks on the use of the compass. SALISBURY.

REMARKS.—Right and proper. Such short and plain rules are exceedingly convenient to most of us many times in the year.

A NEW HORSE RAKE.

A writer in the *Germantown Telegraph* says:—

"To the already extended list of labor-saving implements used on the farm, there has been another lately added, which is really a remarkable and valuable invention—being calculated to rake either hay or oats, on rough or level ground.

"In my opinion no invention calculated for the lightening of farm labor has been made for the past half century which can be regarded as more decidedly valuable. There is no need of stopping at all in placing the rows; it does its work perfectly; is cheap; easily mended when out of order; saves the labor of one hand, and will rake oats or barley as well as hay! Indeed, the latter grain is always so short, that the hand-rake never takes it clean, while this instrument leaves scarcely a straw behind. Any farmer who mows twenty-five acres of grass, and half or two-thirds the number of acres of oats and barley, would save the price of one in a season."

Our readers will recollect that we recently gave a cut of the rake described above. We have used it three seasons, and fully concur in what the writer states above, and will add, that the person raking rides, and finds the labor a light one.

A WONDER.

According to some Italian journals, a new organized being has been discovered in the interior of Africa, which seems to form an intermediate link between vegetable and animal life. This singular production has the shape of a spotted serpent. It drags itself along on the ground, and, instead of a head has a flower shaped like a bell, which contains a viscous liquid. Flies and other insects attracted by the smell of the juice, enter into the flower, where they are caught by the adhesive matter. The flower then closes and remains shut until the prisoners are bruised and transformed into chyle. The indigestible portions, such as the head and wings, are thrown out by two aspired openings. The vegetable serpent has a skin resembling leaves, a white and soft flesh, and, instead of a bony skeleton, a cartilagenous frame filled with yellow marrow. The native, consider it delicious food, at least so says the paper from which we copy the above, but we consider the whole story a fabrication.

For the New England Farmer.

FARMERS' DAUGHTERS.

"It's all owing to her *larning*," exclaimed Aunt Judy, as she commenced rubbing her glasses with her new calico apron. "If they had n't sent her away to such a fine school she'd never a had such stuck up notions in her head! I never yet saw a mite of good come of it! Nobody need tell me, it is in the bringing up, for a nicer woman than Susan Grey's mother never was made. She's up airy and late, and one thing is sartain, she don't feel herself above the meanest creeter that walks. I hold to ministers and school-masters being larned and sich like folks, but it don't seem as if there was a mite of need of farmers' girls having sich larning."

"But what is the trouble with the daughter, Miss Beman?" inquired the new school teacher, as Aunt Judy replaced her glasses and resumed her knitting.

"Law sake! I don't know hardly how to tell you, only they have gin her a sight of schooling here, and away from home too, and they have jest about spoiled her; but Mrs. Green, here, can tell you enough sight better than I can."

"As to that," said Mrs. Green, "Aunt Judy and I are such good friends, that we will agree to differ in our opinion of these matters."

"It seems to me that time will rectify Susan's errors, for I do not deny that she has some foolish notions, but not, as I think, owing to her education, but only for the want of a little more."

"Bless me," exclaimed Aunt Judy, "how in the world could she have any more?"

"I will tell you what I think of these things, Aunt Judy, and perhaps we shall one day see even in Susan Grey's case, whether these opinions are correct or false."

"Farmers' daughters, from their earliest childhood, are, as a matter of course, accustomed to country notions, and country fashions. Comfort, happiness, and usefulness, rather than show, are what they are familiar with. Farmers' children do not see labor performed by servants only, but they see father and mother engaged in the active duties of life. Now it is not at all strange if a young miss who looks not beneath the surface at first, is quite fascinated with the glitter and display of a city, or that she should begin to think her quiet home in the country *very homely*, or that she should rather conclude that it was better to have servants do all the work. But ought the fear that the farmers' daughter will despise the home of her youth, and regard labor with aversion, to deter her parents from giving her all the advantages of education which their means will allow? Why, it seems to me it would be quite as ridiculous to exclude the pure air of Heaven from our dwellings for fear of breathing the pestilence, or to refuse to build a fire in mid-winter for fear our children would be burned! Let a farmer's daughter acquire as much information as possible, and let her be as accomplished as she pleases, but it seems to me she is, or ought to be, the last one to despise *common things*. Not that her being a farmer's daughter should prevent her having her full share of New England pride, but one ought never to despise any business or affairs which may claim a tolerable share of one's time and attention in after life. Although there may be no actual merit in being well versed in these common

things, yet there is great folly in being willingly ignorant in regard to them. One of these common things of which you suppose Susan ignorant, Aunt Judy, is *cooking*."

"Law yes; if I had gals, they shouldn't be educated to be afeard to burn their fingers with a hot pancake!"

"The truth is," resumed Mrs. Green, "few young ladies while at school have any idea how close an oversight the mistress of any well-regulated household has over her kitchen affairs. Although she may not be required to do her cooking, &c., entirely with her own hands, yet she is obliged to have the care of, and see to the whole."

"There are many ladies of superior education, who, commencing housekeeping with small families, choose to dispense with help, and do their own housework. Depend upon it, many a young housekeeper would gladly exchange her knowledge of French and Italian for the ability to place before her husband and guests a dinner which should be satisfactory to herself. Not that the exchange would be justifiable, but for the time being, the need of the one is felt to be almost as great as that of the other."

"A lady who was reared and educated at the South, married a New England clergyman, who, not unlike many of his brothers in the same profession, was not overburdened with this world's goods. The lady not from necessity alone, however, took the charge of her domestic affairs. Visiting her one day, I could not but observe the ease, and perfect order, with which all her arrangements were carried out. As I remarked this to her, she replied that the satisfaction which the discharge of these duties afforded her was sufficient to repay her for all the anxiety and care which she endured while attempting to learn. 'Were I mother of a score of daughters,' said she, 'they should all learn to cook while under the home roof; I was a novice in this branch of housekeeping, and finding, after some vain attempts, that I could not learn without a teacher, my husband brought the daughter of a farmer out of the city to our house, to give me lessons.'

"Often as twilight gathered around us, and she would solicit me to play some favorite piece of music, did I think that I would gladly have exchanged my acquirements in this delightful art with my beautiful instrument which I brought from my home, for her knowledge of *cooking*. But as I was a teachable pupil, I soon acquired this knowledge which you see is so useful to me; of my tears and discouragements, at my first attempts and failures, I will say nothing. This is no uncommon case, but it is the experience of hundreds."

"But *farmers' daughters*, above all, should not be ignorant of this branch of education. They can acquire this more easily than others in different situations, for they are less liable to be interrupted by visitors, and usually have every facility and convenience at hand, and in truth there is no earthly reason, why they should be ignorant of any of these things. But I have almost forgotten Susan Grey, of whom you were speaking, Miss Beman!"

"Wall, now, do tell me Mrs. Green, after all you've said, which sounded well enough, if you don't think it would a bin better for Susan, if Mr. Grey had a took that very money which he paid out for her schooling, and bought two cows a purpose for Susan, and put the rest on't into the

Savings' Bank? Don't you think she, and all that has any thing to do with her in futer, would a been a sight better off in the long run?"

"By no means, Aunt Judy; why, the cost of an education is the last thing one ought to think of, but I will talk to you of this another time, for I fear Miss Holt is getting impatient to hear the end of our talk."

"Oh no, I was just thinking I would ask if the young lady was not blessed with common sense?"

"Oh yes, I never heerd any body say but what she is *bright* enough; when she was a very little girl I used to think she was proper bright, but I can tell you all I've got agin her is this, since she has got her education, I can't help minding that she appears proud in the meeting-house, and when she walks along in the road, and she ain't near so free to take hold and help her mother, and if any body knocks at the 'fore door,' off will come her calico apron, and I could tell more sich things if I was a mind to, but mind ye, it wan't so before they sent her away."

"Perhaps these things are all true, Aunt Judy, but depend upon it, that as Susan has a good heart, and good sense, these notions which you rightly call foolish, will be of short continuance, and you will yet say that Susan is a better woman, a better neighbor, and a more valuable member of society, than she could have been with little or no advantages of education."

At this moment little Emma Green reaching up, whispered, "Mother, the great girls said at school to-day, that Susan Grey was going to be married to John Wright." This was spoken loud enough for Aunt Judy to hear, who exclaimed, "Mercy on me! mercy on him, I mean! Wall, I know 'twill be the undoing of him! I can't think but he has lost his senses. Now I see 'twas well his dear mother was taken away from the evil to come." At the same time rolling up her work without knitting into the middle of her needle, a thing which under any ordinary emotion she would never have done.

"It would be difficult to determine," said Mrs. Green, after her sudden departure, "which is greater, Aunt Judy's surprise, or her desire to communicate the news, and witness the surprise of all she will see before reaching home. Naturally kind and benevolent in her feelings, she is interested in the affairs of others. Aunt to all in general, and no one in particular, she cares equally for the good of all, but her love of gossip has already grown to a passion; slow as she is in her motions, yet like the magnetic telegraph, if there is any news to be communicated, it is done quickly."

"I've been in to see John Wright's wife," said Aunt Judy, as she stopped before Mrs. Green's sitting-room window, two years after the above conversation. "You know I always make a pint of going to see every body—I should a gone as soon as they were married, if I had not had the rheumatism so bad."

"Did she catch off her calico apron?"

"Law no, I did not go in to the 'front door,' I like to go through the kitchen and look round a bit; but she had some pretty grand looking company come whilst I was there, from N——. Susan did n't seem a mite put out, but would make me stop to tea; her supper was proper nice,

and I looked round considerable, while she was getting tea ready, and every thing was neat as wax. I did not think of setting down to the table with the rest of the company, but she would n't take no, for an answer. I thought I would try her once, so I says right at the table, 'your butter is beautiful, Miss Wright, did you make it yourself?' You see I thought she would be kinder ashamed to own it before them smart folks.—

'Qh yes, Miss Beman, I have no girl, and I do all my work,' she said. 'Most I'm afeard of Mrs. Green, is that she will work too hard.'

"I see you have changed your mind, Aunt Judy."

"O, wall, I don't know but it is partly owing to her 'making out' so well marrying, but she is a beautiful woman, not a mite proud; but I must go, for I see my cow is waiting at the bars." D.

Brentwood, 1852.

REMARKS.—Capital. We thank you, madam. Our new Kossuth is off and we present our best bow. We trust "Aunt Judy" will consider herself demolished, and that all her nephews, nieces, and "cronies o' that ilk," will surrender at discretion. But there are a great many "Aunt Judy's" still left. Ignorance and prejudice are fast anchored among us. In different districts they take their peculiar form and shut out the rays of truth which ought constantly to stream in upon the mind, about as effectually as the roof does the rays of the sun. There is no stopping-place for those who are willing to labor; line upon line and precept upon precept are as necessary now as though the words had never been uttered before. Pray let fly another arrow from your quiver, madam; it will pierce a head of prejudice somewhere, and the monster will have one the less to be broken.

For the gratification of our correspondent, we will say, that her "Farmer's Wife," published some weeks since, has visited various parts of the Union, and often comes back to us in delectable company, looking as youthful and happy as when first it left its mother's home.

For the New England Farmer.

VEGETABLE POISONS.

MR. EDITOR:—I saw in your last number what was said to be good for vegetable poisons. But I think I have a remedy far before buckwheat flour and vitriol, or the wild Salandine, and the scratching thrown in, which is as follows:—Take the leaves of what is called Plantain leaf; pound them fine in a mortar, then put them in a cloth and press it hard until the juice is all out. Drink from half to two-thirds of a tumblerful of it at a time, which should be taken on an empty stomach in the morning; and the same on going to bed would hasten a cure more rapidly. It is not necessary to put anything on the outside, for the Plantain being taken inwardly, not only kills the poison, but it drives it out of the blood, and purifies the whole system. Applying remedies to the surface may kill the poison, but at the same time you may

drive it into the blood, which is worse than to have it on the surface.

The above recipe I give from personal experience, as I have been cured by it repeatedly from poison extending over my whole body. I have also known others to be cured by the same remedy. The Plantain grows plentifully about most houses and barns.

C. B.

New Hampton, N. H., 1852.

For the New England Farmer.

POTATOES AND MEN.

Be it as they will have it, that man is but a mere potato. It is a matter of no little importance to know what men are made of. Yesterday it was said of a thoughtless multitude, who do not read the papers, "They are small potatoes." If so, they have one sign of popularity,—there are many of them.

A potato lives but a short season. So it is with man. Each has its spring-time; each has its time to be harvested; each, uncultivated and wild, lives without any important end.

The hidden life of the potato is that which defines its true value. The hidden life in man, a well-stored mind, is something more than potato-tops.

What is that man made of, who toils in the field yonder? What is he? He is made of the same that a potato is made of, the elements of the earth. He was taken out of the ground, and a good part of his walking body was last year growing in the potato field. As the woodman who felled the forest was preparing to build houses for men's bodies to live in, so the man of the hoe, as he digs open the potato-hills, prepares to build up the house in which the inner man holds his courtly abode.—What can the world do without potatoes? Almost as well might we now ask, what would the world be without inhabitants?

Potatoes cannot live without food. They must have something to eat, and the kind of food which suits their nature, just like human beings, or they cannot be healthy,—they cannot grow. It is not enough to know that human beings require food. The cook should know *what* food is suited to the health and life of man. If man is compelled to feed upon matter which is unsuited to his constitution and nature, the consequence is, he dies. There could be no poison, were it not that certain properties cannot live together. So poison kills; and yet, what is deadly poison to one animal body is nutritious food to another, or, at least, it is harmless.

It is no more necessary that the farmer's wife should know how to feed her children, and the farmer how to feed his cattle, than it is that he who puts a potato to work to raise other potatoes should know how to feed that growing potato.

A farmer feeds salt to his cattle; but will he therefore feed his hens with salt? He has perhaps learned how to feed a hill of corn; does he therefore know how to feed a hill of potatoes, or a hill of beans? "All flesh is not the same flesh," and all vegetables have not the same properties. It may be admitted that all men are potatoes, and that some fields have produced quite a large supply of "small potatoes," which scarcely have eyes enough so that they can see to read; and worse than that, some of their heads are those so like

the heads of a potato, that there can be no question about it, they are "tops."

Every ton of grown potatoes necessarily takes from the soil several pounds of potash, and no small quantity of the properties of common salt. It takes up also the properties of Epsom salts, plaster of Paris and animal bones, in less quantities. It takes up the elements of water, and of decayed vegetable matter to some extent. From this we may see at a glance what must be given as food to the growing potato. The dry matter of the tops is nearly one-half lime, but there is a much smaller proportion of lime in the tubers.

Men breathe, and potatoes may be said to breathe also, for they take much substance from the air. They cannot grow with the tops cut off, much more than a man can live with his head cut off, because they must take a part of their growth from the air, as man by breathing lives. So much for potatoes.

C.

Mason, N. H., March, 1852.

WOOL.

This great staple is one of much importance to many of our readers, who will read with interest the following remarks from the *Commercial Journal* of Pittsburg, written by a correspondent who thoroughly understands the wool-trade:—

Very little, as yet, has been done in this important staple of our country. Cold weather, and an exceedingly late spring, have kept the growers from clipping their sheep, consequently very little will be done till June. This time last year, eastern manufacturers had their agents in the country, speculators and dealers were in the market, and a general anxiety to purchase. This year, matters present entirely a different aspect; no orders have been sent out, and very few, if any, agencies have been made. Our city dealers talk of the extremes of 20 to 33 cents for common to full blood, and 35 cents for strictly prime, which is a decline of fully 10 cents per pound, from the opening prices of last year.

It is generally conceded the clip will be heavier than usual. Very few sheep were killed the past winter for the pelts and tallow, and as a natural result, as we have been informed by those experienced in matters, an increase in the weight of the fleeces, from the severity of the winter. One thing is very certain, woollen goods are unusually low; and in the face of an easy money market in the east, still declining. The manufacturer says he must get wool lower than last year or stop. They cannot expect any protection from our government, and their only hopes are to get their wool at such prices that they can compete with foreign cheap capital and cheap labor. Our western farmers and wool growers now can begin to see who have to hold the bag. We trust and hope better things. We like to see our products bringing good remunerating prices. When the farmers flourish, we all flourish; when they are doing well, every department of trade feels the beneficial effects.

☞ We are glad to hear that HENRY F. FRENCH, Esq., of Exeter, has consented to give the address before the members of the Hillsborough Agricultural Society, at their next annual Fair, next autumn.—*Granite Farmer*.

FRENCH MERINO SHEEP.

We give above a group of beautiful *French Merino Sheep*, the property of GEORGE CAMPBELL, Esq., of West Westminster, Vt. The description of them below, is a portion of a report of a committee made to the Farmer's Club in the town mentioned, and is undoubtedly accurate, as the report was adopted by the Club.

To the Agricultural Club of Westminster West, Vt.

Your committee appointed "to examine the flock of sheep imported from Europe last spring by Geo. Campbell, Esq., and report their opinion thereof," ask leave to make the following report.

That we have attended to the duty assigned us, and are happy to be able to make in general a favorable representation of the flock in question. They are composed of both French and Silesian Merino. The French Merinos were selected with great care by Mr. Campbell in person from the Government, and other of the best flocks in France. They are of an extraordinary large size, generally good form, with a thick, even fleece, good length of staple and fair quality of wool. They seem to be hardy and to possess a good constitution, are very docile and quiet in their disposition, and this, with their great size, seems to point them out as a valuable variety for their carcasses as well as their fleeces.

The average live weight of 61 breeding ewes, (a part of which are at the farm of Wm. Chamberlain, Esq., of Red Hook, Dutchess County, N. Y., who is a partner of Mr. C.) after shearing last spring, was 103 lbs., of their fleeces 12 lbs. 8 oz. of unwashed wool. His buck, "Matchless," of this variety, is believed to be the largest save perhaps one in the State, and is really a noble looking animal, being short legged, thick set, well formed throughout, and worthy the attention of all our

wool growers. His live weight after shearing 224 lbs., weight of fleece 20 lbs. 12 oz. He had evidently lost a large quantity of wool and some flesh on the voyage.

The breeding ewes are in very good condition, though not so excessively fat as some we have seen in another part of the State. They are now nursing, and seem to retain a good healthy appearance, both mother and young, much more so in our opinion than they would do if they were unnaturally covered up with fat as the flocks referred to.

TRICKS OF ANIMALS.

In breaking or managing a horse, however intractable or stubborn his temper may be, preserve your own. Almost every fault the brute has, rises from ignorance. Be patient with him; teach and coax him, and success in time is certain.—There are tricks, however, which are the result of confirmed habit or viciousness, and these sometimes require a different treatment. A horse accustomed to starting and running away, may be effectually cured, by putting him to the top of his speed on such occasions, and running till pretty thoroughly exhausted.

A horse that had a trick of pulling his bridle and breaking it, was at last reduced to better habits by tying him tightly to a stake driven on the bank of a steep stream, with his tail pointing to the water; he commenced pulling at the halter, which suddenly parted; over the bank he tumbled, and, after a somersault or two, and floundering awhile in the water, he was satisfied to remain at his post in future, and break no more bridles.

A ram has been cured of butting at everybody, by placing an unresisting ewe in a similar position; the sudden assault on a wintry day then resulted in tumbling his ramship into

a cold bath, which his improved manner took good care to avoid in future.

A sheep-killing dog has been made too much ashamed ever again to look a sheep in the face, by tying his hind leg to a stout ram on the brow of a hill, while the flock were quietly feeding at the bottom. The ram being free, and in haste to rejoin his friends, tumbled and thumped Master Tray so sadly over the stones and gullies, that he was quite satisfied to confine himself to cooked mutton thereafter.

Man's reason was given him to control "the beasts of the field and birds of the air," by other means than force. If he will bring this into play, he will have no difficulty in meeting and overcoming every emergency of perverse instinct or bad habit in the dumb things by his superior cunning. —*American Agriculturist.*

WATER—WATERING GROUNDS.

Pure water is composed of fifteen parts hydrogen and eighty-five parts oxygen. But this is not true, precisely, for other substances are held in solution by water, besides the two above named. It may, however, be the exact proportion of these two constituents, which compose very nearly the whole of water; though the proportion may be somewhat varied in the different kinds of water. This is so important an element in the vegetable process and economy, that a few lines in relation to it cannot be amiss in our columns. Highly beneficial in some forms and certain quantities to vegetation, water may yet be positively injurious in others. Water in minute quantity is favorable to combustion, as we often notice the blacksmith moisten his coal, though in excess it quenches it. So it is with air. The blowing of the breath, or of a bellows, kindles a fire, while the same blast will extinguish the flame of a lamp. Thus water and manure also may be given in such excess to plants as to be positively injurious.

Rain water is considered the best for watering grounds by reason of the principles with which it becomes saturated in the atmosphere. It is soft, easily dissolves soap, and is best for cooking. This might easily be collected by the farmer into cisterns, and used as occasion requires; though by long keeping in cisterns it loses some of its valuable qualities. Where it is practicable, a better way would be to collect it by gullies in some low spot in the garden, forming a small reservoir or pond to be used as needed. Rain water is supposed to be better for watering, when it has run over the ground than when it falls from the clouds.

The waters of rivers and running brooks flowing over the surface of the ground are very good, and supposed to be better the farther they have flowed and the greater their volume. Small rivulets may contain oxide of iron not sufficiently decomposed, or other matters injurious to vegetation, which is not the case in larger bodies of water, or likely to be.

Stagnant waters exposed to the sun and air become filled with animal and vegetable matter which though injurious to man, is highly salubrious to plants, and is therefore very good for the purpose of watering.

Spring water is apt to be too cold for some vegetables, and should stand exposed to the warm air in vessels before applied. As it is frequently conveyed a long distance under ground before coming to the surface, its character is of course varied by the kind of earth through which it has passed, and may be beneficial or injurious accordingly.

Well water is considered the least beneficial to vegetation, though perhaps it is more used than any other. Well water, that is soft, good for washing, will, if kept standing some time in vessels exposed to the air, be good for plants. Well water or other containing gypsum in solution is hurtful to them, and should not be used.

For the New England Farmer.

PRACTICAL FARMING—NO. 4.

CORN CULTURE.

MR. EDITOR:—I suppose that almost every man who lives on a farm calculates that he "knows how to raise taters and corn, without looking into any of your garbled books and papers; for he learned of his father, and he knew how as well as any body;" but be that as it may, I believe in improvement, and in order to make all we can, it is just as necessary to report a failure as it is if we succeed ever so well; that others may not fall into the same error.

Last spring I planted one acre and a half to corn. An acre of it was to potatoes the year before, and the other half acre to corn. The half acre was manured with green manure the year previous, and last year I used well decomposed manure in the hill, applying no other in any way. I put a smallish shovelfull to a hill. On the acre I put about twenty loads of green manure; plowed it in about five inches deep, using none in the hill. No lime or ashes were used on either. 250 lbs. of gypsum was used. It was all in one piece. That on the half acre was considerably the best. The whole was extremely light, yielding only fifty baskets of ears. The reason of the failure, I think, was the absence of the phosphates, and might have been supplied by the use of lime, gypsum or ashes. If others have had similar results, please report. S. TENNEY.

N. Raymond, Me., May, 1852.

A MISSOURI FARM.—There is a farm upon the prairie, near St. Louis, owned by Ligerson & Brothers, (who seem to understand that to make money by farming, money must be invested to begin with,) comprising one thousand acres in one field, fenced with posts and rails, a mile and a half square, and containing 150 acres of corn, 40 acres of strawberries for the St. Louis market, 30 acres of flowers, 50 acres of peach trees, and 200 acres of other fruit, among which are 2,500 pear trees, 200 acres of mowing, and 30 of pasturage. One row of pear trees is three-quarters of a mile long,

with a protecting row of arbor vits. All the orchard ground is cultivated in strawberries, melons, or something else. There are 600 sheep and 160 cattle kept on the farm.

For the New England Farmer.

WHAT KILLS THE APPLE TREES?

BY HENRY F. FRENCH.

A few moral reflections—Death of apple trees—Valley of the Connecticut—U. S. fast coach—Keene—Claremont—Francestown—Chester, &c.—How the cold affects the trees.

MY DEAR BROWN:—New Hampshire would be altogether too pleasant a State "to emigrate from" were it not for about seven months of cold weather, and some other trifling circumstances which remind us that perfect happiness on earth was not a part of the great plan of creation. How admirably would all our agricultural schemes work out to our satisfaction, were it not for the unlucky accidents, which are always happening, showing how

"The best laid schemes of mice and men
Gang aft agley."

If there would not always come a freshet, or a drought, or an early frost in autumn or a late frost in June, or some unlooked for calamity, surprising to the "oldest inhabitants," what crops of corn, and potatoes, and grass, would we not have? What vines and fig trees of our own would we not sit under!

But alas! as we set forth in bills in chancery, "the contrary thereof is the truth." Instead of everything "turning up favorable," as Mr. Micawber expected, and revolving like good steady planets in a regular comprehensible orbit, round some central principle, off they dash, like so many comets into all sorts of eccentricities, doubtless by some rule of "order not understood," putting all human calculation at defiance. As the good Cardinal Wolsey, following the sentiment of the wisest of men who pronounced all earthly objects and pursuits "vanity and vexation of spirit," well says—

"This is the state of man—to-day he puts forth
The tender leaves of hope, to-morrow blossoms,
And bears his blushing honors thick upon him;
The third day, comes a frost, a killing frost.
And when he thinks, good easy man, full surely
His greatness is a ripening, nips his root,
And then he falls."

And so I come naturally to my particular subject of remark. The effect of cold on fruit trees. I had on my place at Exeter, last autumn, about one hundred and sixty young apple trees, some set out in the fall of 1846 and some every year since. I think some twenty-five or thirty of them, principally of those set in 1848-'49 and-'50, have their tops destroyed by the cold of the last fall and winter, and I fear that many others are seriously injured. Early in April, I noticed in cutting off small branches near the trunk of the trees, a circle of yellowish wood immediately under the bark. I have watched them carefully since. The buds appeared to swell as usual.—Some of them opened partially and some not at all. The bark on the outside looks perfectly fresh and sound, with the exception of two or three trees, from which it has blistered and cracked a little and started off. The wood next the bark is yellow.

I have trees at all stages, from those leafless and black, to those in full vigor. Some have a

few leaves at the ends of the limbs, and some a branch or two in leaf, and the rest bare. I think the best course will be to saw them off near the ground, and graft them with scions cut at the proper season. And in this experiment I feel no great confidence of success, because I find that several of my trees which had been set three years, and then were grafted last spring, are dead, and that they gave the earliest and most decided symptoms of injury, the bark and sap wood being yellow, at my first examination of them in April, although the scions grew well and even have thrown out small leaves this spring. In this village, I find quite a number of apple trees in the same condition with mine—most of them which have been from the nursery but two or three years. Since I left you at River Cottage, on the 22d inst., I have made what Queen Bess would call a *Progress* through a considerable portion of New Hampshire, and have, of course, carefully observed the condition of the fruit trees on my route. That you may have a realizing sense of my opportunities for observation, I will briefly sketch my line of travel before comparing results. From Concord, Mass., I took the railroad to Fitchburg, and then up the Cheshire and Sullivan railroads, through the most beautiful and magnificent scenery that can be seen in New England on any railroad line, up the lovely valley of the Connecticut, stopping a day at Keene, Charlestown and Claremont, to pay my respects to the Monadnock and Ascutney, and other distinguished characters, who give dignity and grace to that side of New Hampshire, to attend to a little *worldly* business and to note carefully the agricultural condition of the land.

From Claremont, my business called me to Francestown, and lest our readers who have only travelled in that favored section of New Hampshire which lies on the Connecticut, should set the Granite State down as a second Paradise, and feel disposed to repine at their lot for being compelled to live any where else, I must give you a glance at what one *goes through* on the overland route between Claremont and Hillsborough Bridge railroad depots.

I was told at Claremont, that the mail stage would leave at five A. M., for Hillsborough, and was ready for a start at the hour, supposing that the United States mail coach, like time and tide, would wait for no one.

After waiting patiently *one hour*, the United States mail coach *did* come, in the shape of a *one horse wagon*, containing the driver and two women for passengers. Upon my suggesting that he was late, the driver said there was time enough, and it was soon manifest that the whole expedition, if such a contradiction in terms is allowable, was planned upon the theory, that *time* was of no particular importance. And so we four in an open one-horse wagon slowly crept out of the beautiful village of Claremont. As we crawled like a very slow funeral procession up, up, up the hills in Unity, the grass seemed less green, the trees showed a thinner foliage, the rocks lay thicker and larger, and it seemed "like a dream when one awakens," to think of railroad trains, and the beautiful villages on the beautiful river I had left. To give additional interest to our position, just as we commenced the ascent of the longest, bleakest hill on the route, it began to rain, and as I had neither

overcoat nor umbrella, I was able fully to appreciate the advantages which vegetation was likely to derive from the irrigation. One of the good ladies, who carefully protected her best yellow bonnet from the rain with a large whitish parasol, by means of which she skilfully conducted the surplus water down the back of my neck, complimented me highly upon my cheerfulness under these trials. Upon my saying that fretting would not help the matter much, she solemnly remarked, "Well, I suppose it is all for the best, and we ought to be resigned to it, and trust in Providence, *when we can't help ourselves.*" And so we came to Lempster, and waited one hour for breakfast, and then proceeded *seven and a half* miles to Washington, when the driver announced that we were to stop there to dine!

It was precisely quarter past eleven when we arrived, and we had come less than twenty miles in all, and had but twelve more to go. But in spite of all remonstrance, the driver *would* stop and *did* stop, and got his dinner and started at twelve, very much refreshed. The country seemed gradually to improve, as we approached Hillsborough, where we emerged once more into a region where everything valuable except *time* seemed to be more abundant than on the United States mail route from Claremont to Hillsborough Bridge. I next visited the pleasant village of Francetown, and returned home by way of the N. H. Central Railroad, through Manchester, and the next day visited the good old town of Chester.

And now, having shown you my opportunities for observation, I will give you the results, and then my theory as to how apple trees have been *winter killed*, as it is called.

At Keene, in the garden of Col. B. F. Adams, I saw apple trees injured precisely as my own are at Exeter.

His garden is in the village, on plain, frosty land, and his trees had grown rapidly. In company with T. H. LEVERETT, Esq., I visited an orchard of some fifteen acres, about two miles out of the village, on the northerly side of a high hill, owned by Mr. Leverett and Hon. JOEL PARKER, now of Cambridge. About 5 years ago, they purchased the tract, which had never been plowed, and is so stony that it probably never *will* be, with a large number of natural trees upon it. They have grafted those trees, and filled up any unreasonably large vacancies, and their trees, many of them large and in full blossom, are likely to prove very valuable.

These orchards are on one of the very top corners of that end of the world, with no shelter between them and the north pole, and not one single tree, twig, bud or blossom, so far as I could perceive, had suffered by the winter. On this same hill I saw peach trees in full bloom, as I did also on the hills at Hillsborough, Francetown and Chester. At the latter place, which you and I, who have lived there for years, know to be one of the bleakest places in this part of the State, every thing in the shape of a tree, apple, pear, peach, cherry, everything that is *not saved off square* at both ends, is full of blossoms. Not a single young apple tree that I could hear of has been injured.

Upon the low, sandy land *subject to early autumn frosts*, the injury is extensive, and it has been greatest to highly cultivated trees. My conclusion upon the whole matter is, that it is not the intense cold of the winter, but the cold weather of

autumn which finds the trees on warm and sheltered land full of sap, that does the mischief. Whether the first severe frosts destroy the peach buds I am not confident, but am inclined to think that such is frequently the case. The wood of the apple tree is probably killed by the freezing of the sap and bursting of the sap-vessels in the fall or early part of winter.

I cannot conceive that the difference between the mere intensity of the cold of the past and of previous winters can have produced such results. In all parts of New Hampshire the thermometer almost every winter sinks to twelve or fifteen below zero, and I have seen plenty of apple and peach trees fresh and blooming this spring, where it was twenty-degrees below during the past winter.

My friend, Mr. HALL, of Bradford, who is good authority in such matters, assures me that his tender shrubs, with no more than ordinary protection, have endured the winter unusually well.

It is obviously important that the true theory of this matter should be understood. Against over-cultivation and against over-protection of trees by shelter in the growing season we may provide, and we may often have choice of hill or plain or valley for our orchards, but against the thermometer's going twenty degrees below zero anywhere at the north, we have no means of interposing any effectual preventive.

Hoping that the readers of the *Farmer* will furnish us the means of comparing notes upon these points, I remain,
Yours, &c., H. F. F.

Exeter, N. H., May 31st, 1852.

HOING.

This important farm operation is now in prime demand. The long-continued cold, succeeded by unusually hot days, together with genial dews and showers, has given vegetation great activity. The corn, potatoes, peas, beans, squashes, in short, all the plants look well—bearing a fine healthy color, and are stocky and strong. With such a start, their growth may be very rapid, and the *weeds will keep pace with them*. A neglect to hoe a field just at the time when it needs it, increases the labor of that operation wonderfully; indeed the error can scarcely be retrieved through the season. Weeds become like the power of a bad habit, almost impossible to be broken up; they not only draw largely upon the soil, but mix their roots with those of the plants, and upon being pulled, loosen and break their tender fibres.

But the benefits to be derived from hoeing are not confined alone to the extermination of the weeds. This is but a small part. Plants only come to maturity under a combination of favorable circumstances. They must have light, air and warmth, and the soil must be in such condition as to administer all these to the young and tender roots, in order to secure their perfection. There may be no weeds to exterminate, while the necessity for hoeing will still exist. Heavy showers, succeeded by fierce suns, form a crust on the surface which renders it impermeable in a great mea-

sure to light, air and heat. This needs to be broken up and pulverized so that it may admit these and the dews and succeeding rains. There are other reasons which it is not now necessary to enumerate. The careful cultivator will not wait for the appearance of weeds as the only evidence of the necessity of hoeing.

For the New England Farmer.

A WORD TO FARMERS ABOUT SUMMER SCHOOLS.

No one denies the utility of education. It is common to call school-houses "the glory of the land." To give the children a "good schooling" is the highest ambition of many parents. To accomplish this desirable result, no better system of education is necessary than that which prevails in our own commonwealth. Yet, strange as it may seem, there are many who keep their children out of school during the summer, that they may work on the farm! With some families this may be the result of stern necessity; being poor, they cannot afford to pay for all the work that must be performed, and therefore, as a matter of economy, the labor of their children is indispensable. It is one of the misfortunes of their poverty, for which there is no alternative but submission.

With reference to such we have not a single admonition to offer. Not one word would we write to awaken in their bosoms painful feelings. They are doing the best they can.

But there is another class with whom no such necessity exists. They are amply able to allow their children to go to school through the whole year, but they keep them home from choice—keep them for pecuniary gain. Sometimes this is done without much consideration on the part of the parents: sometimes it is done because it is the fashion; for in some places it is just as much the fashion to keep children from school in the summer, as it is to clothe them in garments of a certain pattern. But whenever this is done, it is a great injury to the child; because, during his absence, in addition to forgetting a large portion of what he learned, he has his habits of study broken up; and when he returns to school, it is much more difficult for him to apply himself to his lessons than though he had not been away. In addition to these disadvantages, when he returns to school, and sees that the class which he left is far in advance of him, feelings of despondency, dissatisfaction and shame are excited, which, on many minds, produce a peculiarly discouraging effect.

We ask now, is this procedure kind? is it judicious? is it *right*? Will you let the minds of your children run to weeds by detaining them at home to keep weeds out of your garden? Will you allow their intellect to become comparatively barren, that through their physical strength you may make your land a little more productive? Are fruits and vegetables more valuable than ideas? Is a strong arm better than a strong mind? Are you more anxious that your children should learn the language which oxen understand, and thus be able to guide them with words, than you are that they should become acquainted with the laws of their own language and by its skilful use, convince, persuade and lead reasonable men?

But you reply; "by keeping our children at

home we teach them habits of industry, and is not that an important branch of education? Certainly. But when you send them to school do they acquire nothing but lessons of indolence? Is there no room for diligence there? Can industry be learned only at home? Any experienced teacher will tell you that children, in order to distinguish themselves as scholars, have to *work*. Indolent pupils are generally ignorant ones. It is here as elsewhere that "the hand of the diligent maketh rich." Many a boy would rather chop faggots, or dig the ground for an hour, than to spend the same length of time in study. It would be easier work, even though he perspired at every pore. The sweat of the brow comes easier than the sweat of the brain. It is a difficult task to work up the mind to a state of intellectual heat or of mental moisture. This is labor. Hence one of the advantages of a well disciplined school is that the pupils are *there* trained to industry. They are taught to work.

We say then to parents, send your children to school as uninterruptedly as possible. Keep them not at home during the summer term. Their school days will soon be over, and then they must enter with their limited degree of preparation upon the responsibilities of life. The best education they can obtain with the full use of all their privileges, they will find little enough for all the important duties which will devolve upon them.

J. B.

For the New England Farmer.


ERRATA.

In my last (page 220) you make me say that I planted two rows with large potatoes cut into two pieces, one piece to a hill, the other two to the small ones from which I had picked the seed for the other two rows. This was a mistake, whether in me or your printer. I planted two rows to whole potatoes, large enough for one to a hill, the other two to the small and large ones, from which I had picked the medium sized ones, (for the other two rows,) cutting the large ones and putting one piece to a hill. Of the small ones I put two, and as I before said, the medium sized whole potatoes produced one-eighth the most. Accept my thanks for your remarks.

Yours for improvement, S. TENNEY.
N. Raymond, Me., May, 1852.

MASS. BOARD OF AGRICULTURE.—The Executive Committee of this Board will have a session at the State House, on Wednesday, the 9th of August, to appoint delegates to the National Agricultural Convention to be holden at Washington, on the 24th day of the present month.

At this busy season it will be inconvenient for the county societies to assemble and make a formal choice of delegates, and we therefore recommend to them to send up to the Massachusetts Board the names of such persons as express a willingness to attend, and let them be regularly authorized by the Executive Committee, to whom was delegated all such powers.

 Mechanics should ever remember that punctuality is the life of trade.

HAY AND FODDER—CUTTING AND CURING.

It may be safely averred that there is not a single operation on a farm that cannot be, and that ought not to be, conducted upon scientific principles. Hence the utility, the necessity, of a scientific education of farmers. If the remark be true of farm operations generally, it is more especially so of the subject of hay-making. In this we require a knowledge of vegetable physiology, of chemistry, of pharmacy. Vegetable physiology will teach us the nature and functions of the various organs and parts and juices of the plants with which we have to do; chemistry will teach us the theory, and pharmacy the art, of curing and saving the article in the best manner. There is no doubt that a very large portion of the nutritive matter of hay, and all kinds of fodder, is lost by a want of knowledge of this kind. The writer of this has never seen a hay-field at *hay-making-time*, that he was not forcibly impressed with this truth. To illustrate this subject—suppose a pharmacist, the Shakers, for example, were to gather their medical herbs, and cure them, and house them in the same way that hay and fodder are usually gathered, cured, and saved—what, let us ask, would they be worth? Gathered at very improper seasons, cured in such a manner as to ferment and evaporate all their intrinsic virtues, and at last housed in a place, and in a condition, to make assurance of its destruction “doubly sure,” it may well be conceived they would not be worth much. There are certain rules to be observed in this, as in all things, to attain the highest degree of perfection before it is cut, and that degree is found to be at the time of *flowering* or blooming, just before the seed begins to form. It being a *herbaceous* plant, the whole natural object of it is to make seed, and all its juices are, at the time of flowering, in their richest state. This is the time to cut it. If cut before this time, the juices are imperfect, and the fibrous matter immature; and if delayed beyond this time, more or less of the richness of these juices is expended in making the seed. If the seed is allowed to become *ripe*, the hay is comparatively worthless. We never saw a load of hay in the market for sale, that did not exhibit unequivocal signs of having had a very large portion of its rich qualities exhausted, either before it was cut, or in curing. When it is understood, that if allowed to ripen seed perfectly, the grass loses all its rich juices, and becomes mere dry straw—woody fibre, a little silicate of potash, and a very trifling quantity of vegetable extractive matter, the importance of cutting it at the right time will be apparent.

And here it is proper to mention another error of almost, if not quite, equal importance. It is that of mixing different kinds of grass together. There are scarcely any two grasses that flower at the same time, exactly, and if two be mixed, that flower at different times, one or the other will be greatly deteriorated by being cut too soon or too late. All grasses, should, therefore, be kept in distinct meadows.

The curing process is, however, of much the most importance. No matter at what times the grass be cut, if it be not properly cured, the hay will be worth less, in proportion to this imperfection. Two tons of hay shall be taken from the same field, the one cured properly, the other care-

lessly—and the one shall be worth twenty dollars, while the other will be dear at any price, except for mere straw. Let us descend to particulars, for the subject is sufficiently important to authorize it. Nearly the whole nutritious properties of the hay are in a fluid, or semi-fluid state, highly susceptible of fermentation; and if fermentation takes place, they will be immediately dissipated in vapor. The object to be attained is to cure the hay, by evaporating the *water* only, of these juices, leaving the saccharine and other principles in a solid state in the body of the grass. But if the juices of the grass be allowed to ferment, then all these principles are rapidly changed, and pass off with the water in vapor. The usual method of curing hay, especially in the middle States, permits the green cut hay to lay in masses till it gets more or less heated, especially the under portion of it. This heat is produced by fermentation. We usually see the hay in the swath till the next day, and then it is merely turned over, and even that very *carefully*. The underside will then be found to be very warm. Now, all this is wrong. The hay should be shaken up lightly, and loosely, so that none of it will lay in compact masses, and that the air may pass freely through it. It should be gathered into winrows as late as possible in the evening, and these should be well opened and turned, and loosened, early in the morning, so as to avoid spontaneous fermentation. If the weather be fair, the hay cut yesterday will be fit for cocking this afternoon, but it is not ready for housing or stacking. A great error is often committed in cocking hay, in allowing it to remain in these small stacks too long. When cocked, the hay is merely wilted, not cured, and if allowed to remain in cocks, will ferment there. They should be opened and spread about, and re-cocked several times before being permanently stacked or housed. Shaking hay about has a great effect in curing it, much more than is generally supposed. It exposes it to fresh air, which carries off the water, and the oftener it is shaken up, the sooner and better it will be cured. Many object to shaking up the hay while the dew is on it in the morning. This is an error. A good shaking at that time, will effectually dry it.

Many an old farmer will undoubtedly laugh at my simplicity, in thinking it necessary to give such plain, common-place notions, publicity. But if they will take a look at the hay that is daily brought to all our markets for sale, they will find abundant excuse for me. Nine-tenths of the hay thus exposed for sale, is a mere mass of dry straw; much of it made so by curing, and the rest by unseasonable cutting. Hay, in a perfect state, should be of a bright greenish color, and as odoriferous as green tea; but the mass of that brought to our markets, is of such a dull straw color, that it requires some close inspection to ascertain whether it be hay or mere *chess* straw, and you may run your nose into the middle of a load of it, (if it be long enough!) without detecting any odor at all—unless it be a musty one.

I must give the New York farmers the credit of producing the best hay we have seen in our city markets. I have frequently used that sent by them to the Baltimore market, pressed in bales, and found it to be worth, intrinsically, twenty-five to thirty per cent. more than that usually brought here from the surrounding country. And the reason of this difference in quality evidently grew out

of the more perfect manner of curing, and attention to the time of cutting. There are many individual exceptions here. There is as good hay made here, as there is in the north, and as good farmers, and as scientific farmers too, but they are exceptions to the rule, not the rule itself. My object, of course, is to do my part to make all our farmers what the exceptions are admitted to be.—
Albany Cultivator.

WHERE DID THEY COME FROM?

On Thursday, the 3d June inst., we entered our garden at about half past 4 o'clock in the morning, where we witnessed a sight new and unheard of by us before. It was a column of the insects which usually appear in large numbers at this season of the year, or perhaps a little later, and generally called May-flies, or for want of a better name, "two-tailed bashaws," by the fanciful. They have two wings and six legs, the two front legs appearing to be used as much as feelers as for locomotion. The abdomen is about half an inch long, and at its termination has two, sometimes three, long hair like appendages equalling the whole length of the body. These insects are dark colored, some of them nearly black. The morning was calm.

They came from the northeast and were flying southwest, in one unbroken column of more than a quarter of a mile in width. They kept about ten feet from the surface, and the column was perhaps twenty feet deep. At what time in the night or how early in the morning they started, we know not; but from half-past 4 to 7 o'clock, the column passed on in the same direction, in countless millions, neither turning to the right or left, but urgently pursuing their course as if they had some important business which could not well be postponed. At a quarter-past 7 none were seen.

Their flight was not very rapid, and what is singular, most of them were coupled together, one flying with his back downward. On disturbing them they merely turned aside, to avoid the obstruction, and immediately came into line again, seeming intent to get *somewhere very soon*.

Contrary to our expectations, the swallow people seemed to take little notice of them. Occasionally they would dart through their midst, but we think did not feed upon them, as we heard no snapping of their bills, nor saw any indications of their attempting to avail themselves of the bountiful harvest.

Like the pigeon in its flight, they kept over the high land, and the higher we ascended the hill, the thicker they were. Where did they originate and where were they going? We know of no one but Professor HARRIS qualified to enlighten us. We should be glad that his lamp might shine upon this marvellous and unexpected visitation.

☛ The whole world has taken the place of Rome in granting indulgence to the rich.

For the New England Farmer.

A NEW APPLE.

DEAR SIR:—I left at your office a few apples of a new variety, a seedling, originating on land of mine in Sherburne, which promises well for late keeping. I have called it the *Mayflower*, as it is unfit for use until that month. I tested its value this spring for the first time. The tree is of small size, standing in a pasture, and has borne a medium sized apple every other year in abundance, but so hard and unpalatable that we never thought of using them for any purpose but cider. Year before last I saved a few of them with other winter apples, and opened them in February; I found them hard and sound, but still unpalatable. Last fall I put up about two-thirds of a barrel of them, mingled with second-quality Russets, filling the barrel. They were not examined until the first of this month; the Russets were considerably rotten, but not one of the Mayflowers, and half a dozen only were specked. Most of them had ripened finely, some were still hard, their flavor, as you will perceive, excellent for the table, rich, slightly acid, and aromatic. I believe they bid fair to rival in durability and excellence even the Roxbury Russet, which now stands decidedly in advance of all late spring apples. If you think this account and the sample afforded you warrant it, you are at liberty to publish it, with such remarks as you may deem proper.

Yours,

R. C. STONE.

Sherburne, May 18, 1852.

REMARKS.—We have tasted the apple referred to, and think well of them as late keeping apples. Our friend, however, is somewhat sanguine in his views, as most people are who find a new fruit so accommodating as to spring up unbidden and come to perfection upon their own premises. We certainly think the *Mayflower* well worth careful attention, and have no doubt it may be considerably improved in size and flavor by giving the tree proper treatment. We have not tasted this apple cooked, but uncooked it falls short in size and flavor of some that keep well until mid-summer.

For the New England Farmer.

MAMMOTH RHUBARB.

MR. BROWN:—Dear Sir,—We send you six stalks of "Myatt's Victoria" rhubarb; it is not so large as we have seen, still it is very fair. We send one of the leaves, as you will see; it is quite large; if you do not raise this variety, perhaps you, and may be Mr. Reynolds, would like to test its quality. We think it as good in quality as any we have ever seen.

Yours respectfully,

JAMES HYDE & SON.

Newton Centre, June 7, 1852.

REMARKS.—We knew you were "tall on vegetables," but had no idea that you were imitating the California pines with your rhubarb. We shall despatch it to "our tie up" by the first freight train! and only regret that you will not be with us to help eat the "four dozen pies" which will probably come out of it!

For the New England Farmer.

AGRICULTURAL COLLEGES.

Perfectly agreeing, as I do, with your Newton Centre correspondent, "W. A.," as to the inexpediency of a State Agricultural College, and mourning the rejection of an article I sent to the editors of the *Farmer* some year ago, in which I attempted to express similar sentiments, will you allow me to thank you for the publication of his article, and to express my approbation of the principle of admitting articles into the columns of agricultural papers, although they may not agree with the opinions of the editors. Political papers may confine themselves exclusively to one side of the question; and so far as they can make their readers bigoted, so far let them call it success. Let the editors of such papers place their own opinions at the magnifying end of the glass, and those of their opponents at the other end,—and let all who like the fun of being thus duped and humbugged, support the system. But don't introduce it into our agricultural periodicals. Encourage correspondents. "Variety is the spice of life." Count it no heresy in one writer to differ from any other, provided he has a reason for the faith that is in him, although that reason may not be satisfactory to him, who, for the time being, chances to occupy the "tripod." Avoid all indications of the "one man power." And by so doing, I apprehend the *New England Farmer* is fast gaining favor and golden opinions in the community.

But I am getting away from my text. I did not, however, intend to preach a sermon this time. I purposed only to say "amen" to the remarks of my brother, "a humble individual" before alluded to. But, as my hand is in, I wish to say a word or two in relation to an argument I have seen, in different shapes, several times in the *Farmer*, for immediate action on the part of this State in favor of an agricultural college, viz.: Unless old Massachusetts leads quick, she must follow instead of lead the enterprise,—an unusual position for our glorious old commonwealth. Now, according to my recollection, this idea of college farming is by no means a new one—nor is it an untried experiment, in our own country. I have access to few agricultural books, to refresh my memory; but I think I have read of several schools in which agricultural science was to have been taught, and my impression is that all these attempts have utterly failed. And such failures of all such incipient attempts to make farmers in school, is to me a practical argument against the possible attainment of the expectations of the advocates of agricultural colleges.

On looking over two vols. of the *Albany Cultivator*, which I am sorry to say form a large part of my agricultural library, I find several notices of schools in which agriculture was to be taught. On page 119 of the *Albany Cultivator* for 1845, is a notice of "Aurora Agricultural Institute," "Charles C. Young," Principal. The institute was located near the village of Aurora, having good buildings and 212 acres of land. Mr. Young says, "it is the intention of the undersigned and his associates that this institution shall afford every facility for young men to make themselves thoroughly acquainted with the principles of agricultural science, and their judicious application to practical husbandry." . . . "It is also their intention to commence a course of experiments, in

order to test the correctness of those principles in agriculture which may now be generally received, but are not quite well established." Dr. Alexander Thompson was to have particular charge of the scientific department. And Mr. David Thomas, a name familiar to every reader of the agricultural publication of New York, was to aid by council and advice. B. P. Johnson, Esq., President of New York State Agricultural Society, recommends the school, and says:—"From my acquaintance with Mr. Young, I am satisfied that he is fully competent to manage an institution of this kind, combining scientific with practical agriculture."

In the same publication for 1844, a year previous to the above, the rise and progress of a regular agricultural college is traced, in successive numbers, which also appear to have given rise to divers sanguine hopes. On p. 74 we are told that an agricultural school had been for some time in so flourishing a condition, near Nashville, Tenn., that "the managers have concluded to enlarge their plan, and accordingly have procured from the Legislature (Tennessee) a charter for an *Agricultural College*." Thus leaving the Old Bay State eight years behind, though she should start now,—a fact, I apprehend, that has escaped the recollection of some of those who have spoken and written this winter on the subject of agricultural education. On page 79 of the volume for the succeeding year, (1845) we find "that this institution commenced operations on the first of January, with about fifty students." Here, then, eight years ago we had an agricultural school and an agricultural college, chartered by a legislature, in the full tide of "successful experiment." Where are they now? ECHO.

Winchester, May 10, 1852.

REMARKS.—It seems to us that the writer errs in one extreme, as some of our friends do in another. It is neither agriculture taught exclusively on the farm, nor taught exclusively in the schools, that is to make the intelligent and successful cultivator. The skillful navigator and mechanic combine theory and practice; and so must the farmer. The latter needs a thorough and exact education, as much as the man of any profession whatever, in order to pursue his calling intelligently, and with pleasure and profit. Where can the young man go, now, to acquire that exact information necessary to enable him to understand the complicated processes of nature about him? To understand the botany, physiology, chemistry, &c., &c., which ought to guide his labor, and make them co-workers with him in his daily avocation? We believe there is a great want of help of this kind from some source, and confess that we know not at present where it is to be found. But we would not separate the practical from the theoretical; they must go hand in hand onward. Let us "make an effort," to do something, and with prudent counsels, there is no need or danger of doing harm.

GREEN MOUNTAIN CULTURIST.—Such is the title of a neat monthly on good large type, devoted to

agriculture and its kindred branches, and published at Middlebury, Vt., by D. R. BASSETT & Co.—The number before us is filled with good articles, and promises well.

For the New England Farmer.

LANCASTER TREE CLUB.

BY CHARLES SIEDHOF.

Lancaster, Mass., is undoubtedly one of the most beautiful villages, not only in Massachusetts, but America. It is not my object to describe it; I wish merely to say, that its roads, streets and intervals abound in trees of large size and elegant appearance. In Emerson's "*Shrubs and Trees of Massachusetts*," two especially beautiful trees of Lancaster are mentioned,—a gigantic elm on the bank of the Nashua, between Lancaster and the Old Common, and a white oak on the foot of George hill.

C. F. Symmes, Esq., of this place, an intimate friend of mine, observing that I was as much delighted with trees as he himself, suggested to me to avail myself of the opportunity which a series of lectures I was to deliver before the Lyceum afforded me, and to propose the forming of a tree club, in order to continue and complete the plantation of ornamental trees on the public roads and walks, commenced years ago by sensible men. I did not for a moment hesitate to do this, and had the pleasure of seeing the "*Lancaster Tree Club*" formed, whose object is the embellishment of the environs of Lancaster. Each member of the club pays one dollar annually, either in cash, or in labor, or in trees. It does great honor to the inhabitants of Lancaster, that they are so ready to support an association, with the greatest liberality, which has nothing to do with making money or the sensual luxuries of life for which thousands and thousands are spent daily. Indeed, there is more in life than money or tea parties. A heart open for nature's charms and beauties cannot beat in the breast of one who is bad.

Lancaster, April 16, 1852.

REMARKS.—Mr. SIEDHOF, the writer of this communication, is the founder and teacher of the school for boys in the pleasant town of which he writes, and which we recently said something about. If we had a son which we desired to send to school, it would be to a person imbued with such sentiments, and such a love for the natural and beautiful, as we have noticed in Mr. Siedhof's writings. But, alas, we have none. Ours, the only son, was called from this beautiful and busy world long years since, away, HOME, where he was wanted by his Father to cultivate, and be cultivated, in a still more bright and lovely existence. We can therefore only prompt others to what we think we should do ourselves in their circumstances. Plant a society, and plant trees. Beautify the heritage that God has given us. Line the highways with trees that will produce fruit as well as shade, and welcome the traveller to both. Let us forget ourselves and make *humanity* appear in every act; then will our memory be sweet, and we shall have no occasion to run a crusade after happiness.

FEEDING STOCK.

There are few of the operations of the farm so little understood as that of feeding out the products of the fields to the animals that are sustained by them. Amid all the exertions of the fifteen or twenty agricultural societies in Massachusetts, encouraged, and partly supported by the bounty of the State, and many of them having among their number gentlemen of learning in physiology, chemistry, and great practical skill on the farm, few exact experiments have been made as to what particular times or in what particular form, fodder for the cattle should be fed out.

Many persons of liberal views and ample means have been discouraged from making these experiments, on account of the distrust and want of faith in the community, in regard to everything done of this kind, which is not performed by the farmer who labors daily with his hands at the plow, hoe or scythe. They possess every requisite qualification for such investigations, and would engage in them with zeal, but for the fear that they would fall still-born upon the world, or only excite the sneers and contempt of that large class so wedded to old habits and notions as never to see any good in anything that is new.

Under such discouragements, we are glad to find the *Worcester County Agricultural Society* appropriating a portion of its ample funds to a series of experiments in regard to the feeding of stock, as interesting as they are valuable to the farmer. These experiments have been conducted by the order and under the sanction of that society. Messrs. JOHN W. LINCOLN, JOHN BROOKS, WM. A. WHEELER, THOMAS W. WARD, and CHARLES BRIGHAM, were placed upon the committee by the trustees, and it is their report upon the experiments made which we now propose to lay before the reader. It will be found of equal interest in all parts of the country and to every grade of farmers whether keeping one or one hundred head of cattle.

The whole report is worthy of being placed upon record for immediate use and future reference, and while we take this opportunity to express our obligations to the society for their wisdom and forecast in directing these movements,—to the committee for their sound and discriminating views upon the experiments made,—and to the experimenters for their pains-taking and careful labors, we shall extract and spread broadcast most of the report before us.

Our readers as well as ourselves, are indebted to the Hon. JOHN W. LINCOLN, Chairman of the Committee, for an early copy of the report, free extracts from which may be found in another part of the paper.

☞ Numerous inquiries having been made, in consequence of a notice, which we published some

weeks since, of a remarkable calf belonging to Mr. B. F. Dudley, of Milton, we would state for the benefit of all the curious, that the calf weighs 310 pounds on completing its tenth week, having gained nearly 3 pounds a day for four weeks; that it has been sold to a gentleman who will raise it for breeding purposes; and that any of our readers who want to see a handsome and well-selected stock of cattle, will do well to visit the farm of Mr. Dudley.

For the New England Farmer.

ON THE CULTIVATION OF NATIVE TREES AND SHRUBS.

BY S. P. FOWLER.

[CONTINUED FROM PAGE 132, VOL. III.]

The long-leaved Willow, or the *Salix Speciosa*, is represented as being a most beautiful tree, and a native of the northwestern part of America. It will undoubtedly prove hardy in the most northern States of the Union, as it was seen around the Great Bear Lake, and on the banks of the Mackenzie river, within the Arctic Circle, by Sir John Richardson, and noticed in his journal of a boat voyage to the Arctic Sea, in search of the discovery ships under command of Sir John Franklin, lately published. Richardson says the Banksian pine was not traced to the north of Great Bear Lake River; and that there the southern *Salix Candida* is replaced by the more luxuriant and much handsomer *Salix Speciosa*, which is the prince of the willow family.

It likewise inhabits the Arctic Sea coasts, from Coronation Gulf to Kotzebue Sound, and ranges southward on the Mackenzie to about the 60th or 61st parallel. It is perhaps the handsomest of the genus, having an agreeable growth, and very large leaves, which are of a silvery whiteness beneath, and when bruised has rather a pleasant odor. On the Mackenzie it grows to the height of 15 feet, in form of a bush, with very stout and long yearly shoots, which distinguish it from all the other willows of the same localities. On the coasts of the Arctic Sea, wherever the rivers afford a suitable point of alluvial soil, a thicket of this willow may be expected, as tall as a man. Mr. Seeman observed it in the tree form, on the northwest coast, where it is from 18 to 20 feet in height, and having a stem, five inches in diameter. Such is Sir John Richardson's account of this fine Polar tree.

It is likewise noticed in Mr. Nuttall's *North American Sylva*, vol. 1st, page 58, and accompanied with a figure; where he says, "no willow on the American continent presents so remarkable and splendid an appearance as the *Salix Speciosa* or Long-leaved Willow, the effect of which is produced no less by its magnitude, than the size and beauty of its foliage. Its aspect is that of a large peach tree, with the leaves and their stocks from five to eight inches long, by an inch to an inch and a half wide; beneath, when adults, they are glaucous, like those of the River Maple. The summit is tufted and spreading, and the tree attains the elevation of about 20 to 30 feet, with a trunk of 12 to 18 inches in diameter. When in full bloom, which is with the first expansion of the leaves in May, the numerous and large bright yellow

catkins, loading the branches, emulate the finest *Acacia* of New Holland; they are also agreeably fragrant, and attract swarms of wild bees, and other insects in continual motion among their waving branches. We have seen this noble species nowhere in such perfection as along the banks of the deep Wahlamet and the wide Oregon, whose numerous islands are almost exclusively decked with this imposing willow.

"As we sailed along the smooth bosom of these extensive streams, for many miles we never lost sight of the Long-leaved Willow, which seemed to dispute the domain of the sweeping flood, fringing the banks of the streams and concealing the marshes entirely from view; at every instant, when touched by the breeze, displaying the contrasted surface of their leaves; above of a deep and lucid green, beneath the bluish-white of silver; the whole scene, reflected by the water and in constant motion, presented a silent picture of exquisite beauty."

We are not aware that this fine willow has been under cultivation in this country or in England, as we do not find it in *Loudon's Encyclopædia* of the trees and shrubs of Great Britain. The *Salix Candida* being found in a high northern latitude, would prove hardy in Massachusetts. It has been introduced into Great Britain, and is said by Loudon to be a very handsome species of willow, well deserving a place in shrubberies, both for its ornamental white leaves, and very early flowers. The *Cornus Nuttallii*, or large flowered Dogwood, is a most splendid tree, some of them rising to the height of 50 or 70 feet. It resembles somewhat the *Cornus Florida*, but the tree and its flowers are much larger. It will probably prove hardy in Massachusetts, like the other trees and shrubs of this genus. The *Cornus Mascula*, or the Cornelean Cherry, although a native of Austria, is perfectly hardy in Massachusetts, and we have noticed recently a plant in our grounds, that has perfectly withstood our severe winter, and its pretty flowers will soon appear. It bears a handsome crimson fruit, of the size and appearance of a cherry, which was formerly used for tarts.

The *Cornus Nuttallii* is figured in Mr. Nuttall's *North American Sylva*, and thus described: "On arriving, towards the close of September in 1834, at fort Vancouver, I hastened again on shore, to examine the productions of the forests of the far West, and nothing so much surprised me, as the magnificent appearance of some fine trees of this beautiful *Cornus*. Some of them growing in the rich lands near the fort, were not less than 50 or 70 feet in height, with large, oval, acute, lucid, green leaves, which, taken with the smooth trunk, and unusually large clusters of crimson berries, led me, at first glance, to believe that it was some new magnolia I beheld, until the flower buds, already advanced for the coming season, proved one plant to be a *Cornus*, allied, in fact, to the *Florida*, but with flowers or colored involucre, nearly 6 inches in diameter!

"These appeared in all their splendor in May of the following year, of a pure white, with a faint tinge of blush; the divisions, also, of this brilliant pseudo-flower, are usually 5 or 6 in number, of an obovate outline, with the points often acute.—The leaves are about 4 inches long, and 2 1-2 wide, with a considerable quantity of pubescence

beneath. The cluster of bright red berries is scarcely inferior to that of the cone of the Magnolia umbrella, and although somewhat bitter, they are, in autumn, the favorite food of the Band-Tailed Pigeon." There is no doubt, but that it is as hardy as the common Dogwood, and more deserving of cultivation. It has been raised from seeds sent over to England, but the plants are yet small.

Danvers, April 28, 1852.

[TO BE CONTINUED]

For the New England Farmer.

BARRE, MASS.

FRIEND BROWN:—This finds me in the fine town of Barre. It is a good farming township, especially in the south part. I have had a good opportunity to examine some of the best farms here, and find them to compare favorably, with any farms in the State that I have seen. I have been much pleased with Dr. J. N. BATES' place. Dr. Bates is secretary of the Worcester West Agricultural Society; he is a practical physician, and a fine agriculturist. His place is very finely situated on the west side of the common, and extends back to the south and west, embracing forty acres of the best of land. He has now on his place, about four thousand fruit trees, mostly young trees, of the best quality that can be produced. Among other things that attracted my attention, was an artificial trout pond, fed from a fine spring; this pond is about twenty feet square, and walled up all around, leaving places for the fish to go under. The doctor raises his fine pan fish, as well as his poultry and swine. He thinks that most farmers might raise their own fish in the same way, by a very little trouble and expense. The doctor is a strong man in the agricultural community, and is chosen one of the delegates to attend the agricultural convention at Washington. I find very many farmers in my travels that think in order to be a good newspaper farmer a man must be worth some ten thousand dollars, or in other words rich. This is a great mistake, and should be eradicated from the minds of farmers, especially the younger ones, who are soon to take the places of their fathers. The young man in my opinion, can enter upon the labors of farming with better hope of success than the merchant or mechanic. Let our young men come up to the work, scientifically, energetically, and a new era will open up in the department of scientific agriculture.

J. ROBINSON.

Barre, June 5, 1852.

MCCORMICK'S PATENT VIRGINIA REAPER AND MOWER.—The attention of those having large crops of grass and grain to get in is called to this important machine. We have never seen the machine in operation, but have examined fields where the grain has been cut by them. On one field, where the owner informed us he cut twenty-one acres the first day he used the machine, the work had been performed in the most thorough manner, saving, it was stated, an amount of grain equal to the wages of the cradlers in cutting the same quantity.

In an advertisement in another part of this number, the reader will find the name of the general

agent, prices, and a more particular description of the machine.

For the New England Farmer.

WHAT KNOWLEDGE IS MOST VALUABLE TO THE FARMER?

MR. EDITOR:—It has been to my great gratification and instruction that I have, from time to time, in a long course of years, read the columns of various of the agricultural journals of the country, and studied the important knowledge with which they are filled. The benefit which has been derived from them to the working farmers and to the country is beyond calculation. They have evidently infused into the farmer the conviction that he had been long toiling in such a mode that comparatively little profit resulted from his labors. He has become impressed with the "sober second thought" that he was not, as he had formerly imagined, in fact possessed of the whole knowledge of his art. He has been made to realize, and to confess to himself, that the mystery of farming involves something more than the handicraft of the business, and that though he may have a great skill and adroitness in the manual and mechanical routine of the farm, he may still be very unskilled in this art, the greatest as well as the most useful of all pursuits. This conviction has filled him with the desire to obtain the requisite knowledge. It has been manifest, from the discussions had at the State House during the past winter, that there is a determination to have the proper knowledge placed within the reach of the farmer. Those discussions, and the writings upon the subject which have come under my eye, have suggested the question, What is the most important knowledge to the farmer?

It seems to be assumed generally by writers and speakers upon the subject that the science of chemistry includes all the knowledge that is involved in agriculture, and I have even heard it plainly intimated by the speakers that a chemist is, of course, a scientific agriculturist. Now I think there is a great error in this. Chemistry, so far from being the whole sum of agricultural knowledge, is not even the most important of the sciences involved in it. The first knowledge necessary to the farmer is that of the elements of which the vegetable structure is composed. That knowledge is not any part of the science of chemistry. The structure of plants, whether we refer to the elements or to the mode of their composition and growth, is taught by vegetable physiology, not by chemistry. It is true that the chemist's science, (if every physical analysis is chemistry,) may be applied to this, as to other matters in the material universe, and may be used to ascertain by analysis what the several elements of a plant, as of any other composite body, may be: but in this particular application it is only a part of the other science, physiology. The second inquiry is, in what manner the several elements may be introduced into its organism and made a part of the plant. This is purely a question of physiology, not of chemistry. It is to be determined by a knowledge of the structure of the plant, and of the functions of the several parts. This will show by what mode the plant is enabled to appropriate its food and to assimilate it to its system. It would be useless that a farmer should know only what kind of food,

whether animal or vegetable, or what particular species of either, was most appropriate and beneficial to any of his working animals or other live stock, if he was at the same time so ignorant of the habits of the animal as not to know by what mode it would take the food, and should administer it, as did the crane of the fable, when she invited the fox to supper, in such a mode that the creature was physically incapable of receiving it. And as the hungry fox left the supper untasted, so may the hungry plant famish and die while food is abounding around it, if not disposed so that it may be taken up into the vegetable organism. The knowledge of the diseases of plants and their remedies is also depending on this science.

But neither is it to be expected that a farmer, if competent to the task, would employ himself in making analyses of his plants to ascertain what particular food is most appropriate. He will learn this from the agricultural journals, or other sources to which he may go to find the result of the analyses which have been made by the chemist. This, in whatever way acquired, is a highly important knowledge. I do not mean to underrate its value. It is highly necessary that he should know that of the fifty-five simple substances or elements which compose all organized and inorganic matter, the vegetable world is constituted principally of only four; three of them only in large proportion, carbon, oxygen, and hydrogen; and in a less degree nitrogen, and that of these carbon is the most abundant: that the hardness of wood is owing to the carbon; that nitrogen is an important ingredient in gluten, to the more or less of which is due in great measure the nutritious property, and the adaptation to peculiar culinary purposes of wheat: and that ammonia, silica, potash, soda, and the carbonate, oxalate and phosphate of lime, enter into the composition of various plants. Having this knowledge, he may understand what is taken away from his land by the different crops; and what should be added to keep up or increase its fertility. But so apt are we to take a one-eyed view of things, that many men anxious for the improvement of the farmer have considered this knowledge as pre-eminent, while others I fear consider it to be the whole sum of agricultural science, and overlook entirely the vastly more important science of vegetable physiology. The structure of the vegetable and of its different parts; the function of root, stem, leaves, flower; the uses of each part in the general vegetable economy; the whole economy itself; and the diseases of the vegetable life, are, beyond all other knowledge, practically useful to the farmer. By this he knows how the proper nourishment is taken up, how, by what agency, and what mode, it is carried through the plants, how it is elaborated and assimilated, the changes wrought in the vegetable tissue, and the periods of ascent and descent of the sap, the effect of temperature and moisture upon plants and seeds; the season of transplanting; of cutting timber and various other matters of greatest benefit in the management of the farm, and in rural economy. A man may have the highest chemical knowledge, but without the other his knowledge will be of no value in agricultural practice. A chemist may have no more knowledge of farming than a blacksmith or other artisan; nor even to a practical farmer will chemistry be of very great advantage in the operations of husbandry, unless

united with a knowledge of physiology. It is only by a union of the two sciences that chemistry can be practically applied to agriculture.

Essex, April 28, 1852.

W. J. A. B.

THE SEASON.

The month of May was too dry and cold to be favorable for the grass crop, and to nearly the middle of June there had but little rain fallen during that portion of the month. Grass did not get well set, and therefore is thin at the bottom, and the crop at present is not very promising.

Grain and corn look strong and healthy. July and August are the months in which the corn crop principally grows; if they are hot and give seasonable showers a fair crop may be expected, although the plants may be backward on the first of July.

Very little rain has fallen up to this time in June, and when it has come has been succeeded by strong cold winds, mostly from the southwest. The moisture has been carried off with extreme rapidity by these winds, so that the surface has become dusty in a few hours after the rain has fallen.

Squashes, melons, tomatoes, and most of the garden vegetables, appear well—of good color, stocky and strong, and with a hot mid-summer and seasonable rains will yield an abundant crop.

There has been frost several nights in the first half of June, but mostly confined to low grounds, and not so heavy anywhere as to injure vegetation materially. There was frost on the night of the 11th. Upon the whole, the season at this time is rather unpromising, and reminds us of the descriptions of the summer of 1816, when it was said that frost made every month in the season.

There is, then, the greater necessity for frequent hoeing and the most careful cultivation, which will do much towards obtaining a good crop.

CULTURE AND IMPROVEMENT OF NATIVE FRUITS.

MESSRS. EDITORS:—I have been frequently surprised that more attention is not paid to the culture of our native indigenous berries and nuts. Who has not noticed the superiority of the chestnut, walnut and other native nuts when grown in a cultivated field, over those taken from the thick forest; and how much larger, sweeter and finer, those taken from some trees than others? This shows their susceptibility of improvement. But how few have ever left natural trees of the chestnut, walnut, butternut, or any other of our delicious native nuts, to grow around their fields; much more to transplant or set them out. I have seen children of large farmers, go a long distance and trespass on the grounds of others, to obtain these indigenous fruits of our soil, when a little care on the part of their parents would have given them these fruits in plenty. This may seem a small subject, but to the younger rural population it is of considerable importance, and not beneath the notice of children of larger growth.

Again, our native berries—the blackberry, whortleberry, &c., such large quantities of which are annually hawked about the streets of our cities—is there no chance for improvement? Has not every one noticed the superiority in size and flavor of some berries over others? Last season, in passing through one of my fields, I noticed a blackberry bush the fruit of which was nearly twice as large as any I had ever before seen, and as much superior in flavor as in size. I intend to transplant and cultivate this, and I hope some day to present you, Mr. Editor, with a dish of “improved blackberries.” Would it not be advisable for our agricultural societies to offer premiums for the best display of our native berries? Perhaps we might soon see as great improvement in these, as in strawberries and other fruits.—*Rural New-Yorker*.

FEEDING STOCK

Auburn, Dec. 23, 1851.

T. C. PETERS:—Dear Sir,—In the fall of 1850 I weighed out two tons of hay, and bought one hundred and thirty bushels of shorts, and put them in a barn by themselves. The hay cost \$12, and the shorts 10 cents per bushel—\$13 50; in all \$25 50. On the first day of December, 1850, I put in the stable three milking cows, and fed them on the above hay and shorts as follows:—One bushel of cut hay with three quarts of shorts to each animal, three times a day from Dec. 1, 1850, to May 10, 1851, making 160 days in all. They were fed regularly, and the feed carefully measured. The cows gave twelve quarts of milk a day, each, all this time, and came out in the spring good beef. This is three bushels of cut hay and nine quarts of shorts per day to each animal, which I think is wintering cattle cheap. The above are the facts of the case; if you think them worth anything you can put them in shape to suit you, if not, pass them by as worthless. The weather is very cold, and has been this month.

I am now feeding in the same manner, and have done so for the last four years. It is the only way farmers should feed, as it more than pays to cut every thing that is fed at this time. Cut all hay and straw, grind all corn and oats, and stable all stock, and then farmers will be doing their duty to their stock.

I am yours respectfully, JOHN B. DILL.
—Wool Grower.

REMARKS.—We are happy to see an increased attention given to this subject, believing that a large amount of fodder may be annually saved by a more systematic course of feeding. Although we have entered into no exact experiments in the feeding of cut and uncut fodder, we have come to the opinion that a horse, for instance, may be well kept at about one-half the expense by having the same quantity of meal usually fed to him mixed with cut hay. We have come to this opinion by observing the effect upon the animal and the quantity of feed used, through a long practice in both ways of feeding. The profits of the farm are increased just in proportion to the saving of fodder, provided the stock thrives as well with the less quantity.

For the New England Farmer.

EVERY MAN A SOVEREIGN.

BY N. C. TOWLE.

MY DEAR FARMER BROWN:—Some six months ago, while I was luxuriating in the enjoyment of my annual privilege of inhaling the invigorating atmosphere of my native New England hills, I had the pleasure of visiting your beautiful town of Concord—so glorious upon the pages of our country's chronicles, as the soil privileged to imbibe the first precious libation of the dawning spirit of Liberty; then scarcely visible in the horizon, but now beaming an effulgence that makes the Russian bear pant and tremble amid the icebergs of his arctic lair. That libation was distilled in the hearts of the sons and daughters of the farmers of New England.

Content to course quietly through the veins of the unobtrusive cultivators of the plain and hill-side—with no ambition but to infuse life and vigor and healthful enjoyment, and to feed the perpetual fire that burned upon the domestic altar—yet its province once invaded and its rustic altars overthrown, it burst forth with a power and fervor that confounded and overwhelmed the mighty hosts of its enemies, as the dry stubble disappears before the consuming fire. Such was the blood that flowed in the veins of our sires. It did not inflame the brain with ideas of pride and conquest and glory, to be gratified by injustice and oppression and interference with the rights and independence of others. It bore the good old Yankee motto, “MIND YOUR OWN BUSINESS.” It bore the invincible, indomitable love of personal and individual freedom; and it had the wisdom and sagacity to perceive its own right to freedom, and its obligation not to interfere with that of others, were inseparable. It said—“Cultivate your own farm in your own way—let your neighbor enjoy the same freedom. He is God's image as well as you—why should you intermeddle in his affairs? Will you permit him to meddle in yours?” “If your neighbor chooses to plow shallow and skim the surface—show him, by the superiority of your crop, the advantage of the *sub-soiler*. If he insists that a luxuriant growth of weeds improves his crops—show him what good husbandry will do for yours.” These were the precepts of our good old New England fathers, and they applied them as well to their moral, religious and political circumstances, as to their farming operations. They claimed no supervision over each other's farm, or church, or form of civil government. Massachusetts took no cognizance of the fact that the proprietary and governor of the neighboring colony of Pennsylvania wore his hat in church, and denominated Sunday “First Day,” nor of the still more ominous fact that the government of Maryland tolerated and even encouraged the catholic religion—nor did the episcopalianism of Virginia call the round-heads of New England to account for substituting *Thanks giving* and pumpkin pies in the place of Christmas and plum-puddings. The conscious dignity of freemen would have induced either to have indignantly repelled any attempt of another to enforce the adoption of her innovations or peculiarities—but each was content to leave the other in the same freedom, she was determined to maintain for herself. And hence it was, that when this principle of individual, social and civil liberty and independence, which had impelled the

May Flower through the surges of the Atlantic, and had sustained the quaker, the catholic and the cavalier, in their struggles with the wilderness and the wild man—when that principle was invaded—when that inalienable attribute of a *man*—which distinguishes him from a biped, was assailed—every heart was *stout*, every hand was nerved, and every noble eye was fixed upon the point of attack.

The ox stood still in the furrow, and the plowshare slept in its place—the young wife received the burning kiss of her stout-hearted husband and freely poured out her heart's life to secure that, without which the widowed wife and the childless mother were to be envied; for *she* could not look down through a long succession of posterity hearing the badge of bondmen and bondwomen. From the moment that the heel of the tyrant's mercenary foot marred the furthest verge of our soil, the electric spark culminated at the peaceful fire-side of the most distant and secluded hamlet. Every furmer became a soldier. The battle was fought—and when the smoke had risen in dense masses from the bloody field, not a trace of the insolent foeman remained. Freedom was vindicated, and her heroic sons eagerly exchanged the field of glory for the field of wheat and barley—the sword and musket for the sickle and plowhandle—and the “pride and circumstance of glorious war,” for the charms and cheers of rural paradise.—Such was the race from which we have descended. Mighty and invincible on the field of battle, but still mightier and the heroes of more glorious conquests upon the fields of nature. Every man was a sovereign “by the grace of God,” and no human power presumed to demand fealty from the weakest among them.

But I beg many pardons for this wide and wholly unpremeditated digression. I took up my pen for the simple purpose of expressing my acknowledgments for the pleasure I enjoyed during my visit to your beautiful “domain,” and to avail myself of your kind offer to introduce me to your numerous readers; and if they shall deem me worthy of their acquaintance, I will endeavor, in some future communications, to give them an account of my observations on the state of the science and practice of the great art of agriculture in these regions. For although I am not, at this time, immediately engaged in “tilling the ground,” it is the *profession* to which I was raised, for which I still retain the strongest attachment, and to which I shall eagerly return whenever I can see my way clear to do so. My love and admiration of its dignified independence has not abated in consequence of my experience or observation in connection with other pursuits. Cincinnatus and Washington acted from the dictates of elevated wisdom when they relinquished the marshal's *baton* and the robes of state for the implements of husbandry. No other condition in life combines so many requisites to true and manly enjoyment, and at the same time so effectually avoids the annoyances and anxieties that attend, to a greater or less degree, nearly every other pursuit. The farmer is not dependent upon the fluctuations of trade, the rise and fall of stocks, or the smiles and frowns of power. He sits under *his own* roof, and *his own* fig-tree. He eats the fruits of *his own* soil and *his own* labor. His only superior, before whom he bows in dignified and grateful homage, is that great and

beneficent Being, who “causes his sun to shine upon the good and upon the evil, and sendeth rain upon the just and the unjust.” Whatever changes may come over the face of the earth, in the progress of ages and centuries—sweeping away the vestiges of human grandeur, obliterating the landmarks of states and empires and mingling with the common earth, the proudest monuments erected to memorialize the worst of deeds, “seed time and harvest shall never fail.” He, who “replenisheth the earth,” shall not fail of a successor to occupy his place and to enjoy and perpetuate his honors and his virtues.

Yours, very truly,

Washington City, March 30, 1852.

N. C. T.

For the New England Farmer.

MULCH—MULCHING.

EDITOR N. E. FARMER:—In your paper of June 5, after remarking “that the only definition of the word *MULCH* in Webster's Dictionary is *half rotten straw*,” you say that “in Worcester's Dictionary we do not find the word.”

We do not see why you did not find it, for on page 470 of the Universal Dictionary of Dr. Worcester, you will find, “*MULCH*, noun, *straw, leaves, litter, &c., half rotten*,” and again, “*MULCH*, verb active, *to cover with litter or half rotten straw, or with manure*,” so on page 261 of Worcester's Comprehensive Dictionary, edition of 1851-2, you will find substantially the same definitions.

As your paper circulates extensively in New England, and the article will be read, being a valuable one, we will thank you to insert this in your next.

Yours respectfully,

JENKS, HICKLING & SWAN,
Publishers of Worcester's Series of Dictionaries.

REMARKS.—The edition of WORCESTER's Dictionary which we happened to take up, in looking for the word *mulch*, was of 1846. There it was not to be found; but Dr. Worcester and his enterprising publishers having none of the Rip Van Winkle tendencies, have progressed with the age as it rolls along, and have not only given the term *mulch* a “local habitation,” but we believe a large number of other words and phrases not to be found in similar works. We supposed the word had not been generally introduced into the dictionaries.

A NEW LAMP.

The following extract is from a private letter.—We give it in order to open the way for this new light, believing that great improvements may and ought to be made in lighting our rooms.

“You have so often mentioned the great danger arising from the use of fluid in lamps, that it will be of some interest to you to learn that after an incessant study of eight years I have succeeded in constructing a lamp which is, I think, superior to all now in use. It is based on the application of two philosophical principles, and having no kind of machinery about it, it is very easy to manage and is not liable to getting out of repair. Last winter I made a great many experiments with it in the presence of a number of scientific men; its light was measured with a photometer, and com-

pared with that of other lamps. The result showed that, 1, it produces from two to two and two-thirds (according to the size of the wick) times as much light as a common glass lamp with two solid wicks from the same quantity of oil, in a given time; 2, the light remains perfectly unchangeable during the time the lamp is used; there is not the slightest decrease or increase of it. This I consider as very important; for nothing impairs the eye-sight more than the gradual and imperceptible change of light in the common lamps; 3, as the capillary attraction of the wick is entirely dispensed with, the poorest oil is just as good for it as the best; 4, it requires no trimming during five or six hours when in use; 5, it is very elegant in its form, and admits of all kinds of ornament; but it can be made for 75 cents.

THE PROPER PERIOD TO APPLY LIQUID MANURE.

The great importance of the liquid manure question, and the numerous inquiries made of us as to the application of this fluid, lead us once more to resume the subject, restricting ourselves on the present occasion to a single point, namely, the period in the growth of a plant when it may be most advantageously applied, or should be altogether withheld.

In order to understand this part of the question, it must be borne in mind—1, that *liquid manure is an agent ready for immediate use*, its main value depending upon that quality; 2, that *its effect is to produce exuberant growth*; and 3, that *it will continue to do so as long as the temperature and light required for its action are sufficient*. These three propositions, rightly understood, point to the true principles of applying it; and, if they are kept in view, no mistakes can well be made. They render it evident that the period in the growth of a plant, at which it should be applied, depends entirely upon the nature of the plant, and the object to be gained.

If, for example, WOOD and LEAVES are all that the cultivator desires to obtain, it will be evident that liquid manure may be used freely from the time when buds first break, until it is necessary that the process of ripening the wood shall begin. Wood cannot ripen so long as it is growing; wood will continue to grow as long as leaves form, and its rate of growth will be in direct proportion to their rate of development; therefore, in order to ripen wood, growth must be arrested. But the growth of wood will not be arrested so long as liquid manure continues to be applied, except in the presence of a temperature low enough to injure or destroy it. Hence it is obvious that liquid manure must be withheld from plants grown for their wood and leaves, at the latest, by the time when two-thirds of the season shall have elapsed. To administer it in such cases towards the end of the year would be to produce upon it an effect similar to that caused by a warm wet autumn, when even hardy trees are damaged by the earliest frost.

In the case of FLOWERS it is to be remembered that the more leaves a plant forms the fewer the blossoms in that season; although perhaps the more in a succeeding season, provided exuberance is then arrested. The application of liquid manure is therefore unfavorable to the immediate production of flowers. It is further to be remarked that even

although flowers shall have arrived at a rudimentary state at a time when this fluid is applied, and that therefore their number cannot be diminished, yet that the effect of exuberance is notoriously to cause deformity; petals become distorted, the colored parts become green, and leaves take the place of the floral organs, as we so often see with roses grown with strong rank manure. In improving the quality of flowers, liquid manure is therefore a dangerous ingredient; nevertheless, its action is most important, if it is rightly given.—The true period of applying it, with a view to heighten the beauty of flowers, is undoubtedly when their buds are large enough to show that the elementary organization is completed, and therefore beyond the reach of derangement. If the floral apparatus has once taken upon itself the natural condition, no exuberance will afterwards affect it; the parts which are small will simply grow larger and acquire brighter colors; for those changes in flowers which cause monstrous development, appear to take effect only when the organs are in a nascent state—at the very moment of their birth. Hence it is clear, that in order to affect flowers advantageously by liquid manure, it should be given to plants at the time when the flower bud is formed and just about to swell more rapidly.

With FRUIT it is different; the period of application should there be when the fruit, not the flowers, are beginning to swell. Nothing is gained by influencing the size or color of the flower of a fruit tree; what we want is to increase the size or the abundance of the fruit. If liquid manure is applied to a plant when the flowers are growing, the vigor which it communicates to them must also be communicated to the leaves; but when leaves are growing unusually fast, there is sometimes a danger that they may rob the branches of the sap required for the nutrition of the fruit; and if that happens, the latter falls off. Here, then, is a source of danger which must not be lost sight of. No doubt, the proper time for using liquid manure is when the fruit is beginning to swell, and has acquired, by means of its own green surface, a power of suction capable of opposing that of the leaves. At that time, liquid manure may be applied freely, and continued, from time to time, as long as the fruit is growing. But, at the first sign of ripening, or even earlier, it should be wholly withheld. The ripening process consists in certain changes which the constituents of the fruit and surrounding leaves undergo; it is a new elaboration, which can only be interfered with by the continual introduction of crude matters, such as liquid manure will supply. We all know that when ripening has once begun, even water spoils the quality of fruit, although it augments the size; as is sufficiently shown by the strawberries prepared for the London market, by daily irrigation. Great additional size is obtained, but it is at the expense of flavor; and any injury which mere water may produce, will certainly not be diminished by water holding ammoniacal and saline substances in solution.—*London Gardener's Chronicle*.

THE WOOL GROWER.—This work is hereafter to be published at Rochester, by D. D. T. MOORE, Esq., of the *Rural New-Yorker*, but conducted by T. C. PETERS, Esq., its former Editor. It is the

only work among us devoted to the wool growing interest—has been conducted with ability, and is printed in a neat and attractive form. We hope the "woolsack" will be plump and easy under the editor, and that friend Moore's twins will multiply and replenish as rapidly as do rabbits.

A REMARKABLE MARE.

The mare owned by me was raised in Hopkinton, N. H., and was brought to Rockport in the fall of 1832, being then between five and six years old. She is of a deep bay color, about fourteen hands high, and weighs in her best condition scant 800 lbs. She has been owned in this place, and used as a let horse, successively by Messrs. Gen. Gott, Jabez Gott, Jr., and Choate & Hadlock, until last July, when she came into my possession. So that her employment in that capacity falls short of nineteen years but a few months. Each of the above named gentlemen are ready to vouch for the statements I shall make respecting her, and are willing to add a little something on their own responsibility.

Whenever a horse was wanted for a journey that required speed and endurance, this mare was invariably called for. To carry two men in a chaise, from Rockport to Boston and back, a journey of 70 miles; to drag a carry-all, with four persons, to Salem and back, 42 miles; were common daily performances with her. She has seen Boston and Rockport as many as five times in six weeks. In her prime she was often hired by a stone-contractor, who lived nearly two miles out of this village. To his house it was usual to send her in the morning, from whence he would drive her to Charlestown bridge and back—not always alone—and return her to the stable in the evening, making the distance of her travel upwards of 75 miles. Recently he assured me that he once drove her to Charlestown in 3 1-2 hours, stopping in Salem about half an hour, and returned the same day. This was at the rate of 12 miles an hour. About this time, she came from Ipswich to this place, 18 miles, in an hour and a quarter.

When about 11 years old, she had seen so much hard work, and had had so many hard drives, that it was thought she must be worn out; and she was offered for sale for \$75, without a purchaser. Subsequently, however, she was sold for over \$100; and since this latter period, it has cost nearly \$5000 to keep a horse in the stable by the side of her. Three horses, valued at upwards of \$100 each, subject to the same service with her, and often favored at her expense, have been completely used up. One of them returning from Salem in company with her at noon in the hottest day of the summer of 1840, the mare having the hardest of it, died within an hour after his arrival. While the mare was in harness the next day, as if nothing had happened.

In January, 1843, she went with a sleigh to Salem in an hour and three-quarters, stopped there one hour and a quarter, and returned in an hour and fifty-five minutes—42 miles in three hours and forty minutes. Not long before this period, she carried four persons in a heavy carry-all to Salem in the forenoon, returned with them late in the evening, and at midnight was harnessed to the same vehicle and sent back in urgent haste, to re-

turn early the next morning with two persons. Thus, in scarcely more than twenty-four hours, dragging that carry-all, with its load, 84 miles.

Rockport, Feb. 14, 1852.

B. HASKELL.

SORREL.

The presence of sorrel indicates an acid soil. It is a sour plant, and thrives only on such lands as are destitute of calcareous matters; consequently, the application of the latter in sufficient quantities to correct the acidity suggests itself as the most effectual method of getting rid of it, and rendering the soil fit for profitable cultivation in other and more desirable crops. Yet the quantity of soil on which this plant is naturally produced, precludes the hope that it will ever be entirely eradicated, and it hence becomes a part of farming to know in what manner it can be most successfully economized, and rendered valuable as an article of animal sustenance or food.

There are, indeed, but few vegetables, however mean and valueless they may be considered, which do not possess some quality capable of redeeming them from the hasty yet common charge of utter worthlessness; and of this order we regard sorrel. As a food for horses and sheep, it not only possesses considerable value, but if chaffed, and mixed with meal, it will fatten them as rapidly, perhaps, as English hay prepared in the same manner. Fed to these animals in its natural state, and without any accompaniment, it is found to retain them in health and heart, and the seed ground and made into "mush," is said by those who have had no inconsiderable experience in feeding it, to be equal to Indian corn. Yet no farmer will ever cultivate sorrel as a farm product. It is exhausting in the extreme, and it is only when it obtrudes itself upon him, spontaneously, that he should endeavor to render it of any account.

The only effectual method of extirpating it is to sweeten the soil by liming, or to increase the staple to a degree which will promote the development of more valuable herbage, and cleanse the soil thoroughly by a succession of manured crops, such as corn, potatoes, or some other vegetable which is cultivated exclusively with the hoe. The seed of the sorrel is not only abundant, but it is so invested in an integument, or horny involucre, which possesses the power of preserving the vital power unimpaired for years, when placed by circumstances so deep in the soil as to be beyond the influence of those vitalizing principles upon which germination is found mainly to depend.

This peculiarity of the seed explains why sorrel so often appears after long pasturage, and the disappearance of the plant from the surface of the soil where it has previously grown.

☞ The excesses of our youth are drafts upon our old age, payable with interest.

DEVON HEIFER.

The heifer represented above was the property of GEORGE SHAFFER, who exhibited her at the State Fair at New York last fall; where she was pronounced a fine animal. To our eye she is not a remarkably fine specimen; being heavy in flesh she does not present those neat and clean proportions usually remarkable in the Devon stock. We have seen a mixture of the Devon and Short Horn blood in heifers that brings out the most commendable points. In giving most of the popular breeds of stock, our readers will be able to make such comparisons as may be of advantage to them in the selection of their animals.

A TREE QUESTION.

The *N. H. Statesman* says the question has been agitated in that vicinity of late, whether the lower limbs of trees increase in distance from the earth as the trunk increases in height. The question arises thus: "The subject was the great feshet of 1785, and mention being made of a notch upon a big elm at the foot of Butter's Hill, indicating the height of the water that year, query was thrown in whether that notch was not delusive, since it might have ascended with the growth of the tree! The matter was discussed, but not fully decided." The question of the ascent of trunks is still open for debate, but the *Hartford Courant* says there is no doubt at all—adding:—"All trees grow by an outward expression, and the base of the limbs never change their place. The case of the pine trees in the forest furnish no exceptions. Where a number of trees grow closely together, there is a reaching upward for the light and air. As the trees grow tall, the lower limbs, unable to reach the source of their stimulus, die for want of it, leaving to the observer of the full grown tree no traces where they once were."

THERMOMETER CHURN.

In making good butter, each operation is a nice one, requiring the utmost cleanliness and care. Regular rules are frequently laid down, which are undoubtedly of some service to the inexperienced. But those taking an interest in the operation, and having a determination to excel, will soon acquire all the skill necessary to produce the richest and sweetest butter.

In churning, it is of great importance to have the cream or milk of a proper temperature, which is about 62 degrees. The thermometer churn affords this advantage, together with convenience, despatch and exactness. The churn is encircled with a case for water, by which the desired temperature may be obtained and indicated by the thermometer permanently fixed in the end of the churn, where it is not liable to injury. We have used it for several years with good success.

The churn is simple, portable, light, and durable, easily separated and cleansed. They are made of various sizes, and the price is moderate.

For an engraving and description of this churn, see Vol. I. of the *Farmer*, page 227.

GARDENING.

We are happy to notice a new movement in this delightful art. In the good old town of ANDOVER, in this State, some of the citizens have formed themselves into an association to promote the interests of farming, gardening, and ornamental scenery, in the town. This will undoubtedly be the means of the formation of a horticultural society, or some permanent organization which will arrest the attention of those able to make improvements and inculcate new views and desires in many who

have never yet given the subject a thought. We hope the general committee will find their most sanguine hopes realized.

BOOKS.

THE FARMER'S CYCLOPEDIA OF MODERN AGRICULTURE, is a beautifully printed volume of nearly 500 pages, and issued by SEXTON, N. Y., the Agricultural publisher. Like all his publications, it comes into the world in a neat and attractive form, and is illustrated with a great many engravings of animals, farm implements, poultry and insects.

This work is prepared by the Rev. JOHN L. BLAKE, a scholar, a close observer and student of nature, and a gentleman whose tastes and sympathies have had such a leaning to rural affairs as to lead him to devote a goodly portion of his life to the wants and interests of the farmer. The book cannot fail to have a widely-extended circulation and become eminently useful.

The following brief extracts from the preface foreshadow the author's design, in part, in preparing the work :

"It is the design of the author, in all his labors for rural localities, to improve the mind as well as the soil. Indeed, such labors for the former will ultimately prove of more benefit than those having exclusive reference to the latter. If the one is duly promoted, the other will follow in its wake. Whenever a rural population becomes imbued with a well-cultivated literary taste and a love of science, there need be no apprehension that agriculture will be neglected, or that it will fail to be duly appreciated. Rarely will the soil receive a defective culture, except from the ignorant and the illiterate.

"It has sometimes been thought by farmers that a book, having particular reference to their vocation, is necessarily filled with oxides and silicates, or with sulphates and phosphates; that the mental food of the scientific agriculturist is a compound of caustics and volatilized poisons; and that his very breath and clothes are so impregnated with carbonates and alkalies, that they cannot approach him without a kind of suffocation. Misapprehensions of this sort must be removed. Prejudices of this nature must be overcome. If not, the treasures of chemical knowledge will do little in renovating the soil. On the contrary, sterility will increase, till the wand of desolation passes over the broad earth. We labor to overcome these obstacles—to progress in rural economy."

MAINE BOARD OF AGRICULTURE.

Among the acts passed by the late Legislature of Maine, was one establishing a Board of Agriculture. The act provides that each of the incorporated agricultural societies in the State shall, at their meeting in the fall, choose a member of the Board of Agriculture. The duty of the Board is to discuss such subjects as pertain to the agricultural interests of the State; to devise and recommend, from time to time, to the several agricultural societies, and to the people, facts, improve-

ments, discoveries and views in regard to the condition and future prosperity of agriculture in the State; and to annually make to the Legislature, through the joint standing legislative committee on agriculture, a report which shall be published by the Legislature as a public document for distribution among the people. The Secretary of the Board is to receive one hundred dollars annual salary, and the members are to be paid not exceeding two dollars per day for their services. The Board will hold its annual meetings at Augusta, on the third Wednesday of January.

FLAX AND FLAX-COTTON.

Gov. Farwell, of Wisconsin, has written a lucid and forcible letter to the State Agricultural Society, urging the propriety of a far more extensive cultivation of Flax in that State. Wheat has proved a very uncertain crop there, and some other staple must be extensively substituted. Gov. Farwell shows clearly that the climate and soil of Wisconsin are admirably adapted to the growth of flax; that \$25 per acre would not be a large average yield, while \$40 per acre may be obtained; and that the importation and sale of 10,000 bushels of seed at a cost of \$15,000 would secure a crop worth at least \$250,000 for the present year, and not less than \$5,000,000 next year.

Mr. John Galbraith, who has grown flax in Waukesha County in each of the four last years, has had three good crops and one middling one. [During these four years, we believe there have been two or three signal failures of the wheat crop.] An efficient Breaking Machine is now in operation at Beloit, where flax straw is regularly purchased by the ton, rotted, dressed, and sent eastward to market. And if the Governor's recommendation is seconded, there will soon be similar establishments in nearly every county, with oil-mills, where seed may likewise be sold for cash.

The flax culture in this country will be considerably extended this season. Hon. Henry L. Ellsworth, formerly U. S. Commissioner of Patents, will sow 500 acres this season. As seed will doubtless be dear for a year or so, it is computed that \$30 per acre may be obtained from good land well cultivated in the Eastern States. The labor is hardly equal to that required to secure an average yield of Indian corn. Twenty bushels of seed have often been grown on an acre, and this alone will probably be worth \$25; while the straw will range from \$5 to \$10 per ton, as it shall be further from or nearer to breaking machinery. Twenty bushels of seed and two tons of straw are considered a fair yield per acre in England.

Four companies are now engaged in the manufacture of linen thread in this country—at Cohoes, N. Y.; Willimantic, Conn.; at Clinton, Mass.; and at Andover, Mass. The Cohoes thread was never excelled in Great Britain nor anywhere else. (There are probably others, but these we know.) And a company has just been formed to manufacture linen fabrics at Fall River, Mass., with a capital of \$500,000. There ought to be thirty such companies organized and operating forthwith, and if the Tariff of 1842 were still in force, there would be.

In England, the business goes on prosperously.

One land owner will sow 2,000 acres of flax this year. Claussen's flax-cotton machinery is evidently gaining favor. His works at Stepney, near London, are a focus of public interest. There the cottonizing process (splitting the flax fiber by saturating it first in a solution of soda and then in one of sulphuric acid) is completed in a few minutes, and at a trifling cost. It has previously been steeped, however, in a cold solution of caustic soda, for some twenty-four hours.

In England, flax straw costs as yet some \$15 to \$20 per ton, delivered, while it may be profitably grown in this country for \$5. We trust its production will henceforth be rapidly extended.—*N. Y. Tribune.*

COWS AND CARROTS.

We send the editor of the *American Farmer*, Baltimore, the original article which appeared in our columns, and which has called out so much valuable information upon a subject on which there was, and still is, a wide difference of opinion. That letter was written by one of the soundest minds and ripest scholars among us; a practical farmer and horticulturist, although not making either his principal business. It was a letter of inquiry, and we have no doubt has been productive of more good to the cause than any other column of agricultural matter which has been written in the union within the last twelve months. We think the editor of the *American Farmer* will not be disposed to find fault with it, when he has read the whole letter.

DOR-BUGS AGAIN.

These annual and inconveniently large and voracious visitors have appeared again. At dusk, they leave the retreat to which they resort during the day, and on noisy wing seek the tender leaves of the finest cherry and other fruit trees, the mountain ash, and sometimes the young elms, if other forage is scarce. They will rarely touch the common mazzard cherry tree if there are others near. They feed upon the soft part of the leaves, rejecting the nerves and veins of the leaf, which gives the tree, when thus defoliated, the appearance of gossamer or net work. Last year, we saved our trees by shaking the "varmints" from them at nine o'clock each evening; this year we have resorted to the suds of whale oil soap thrown upon the tree by a syringe. Now is the time to look out for them.

EXTRACTS.—Mr. Oliver Blanchard writes that he has seen a heifer belonging to Mr. P. A. Sweet, which came in the 19th of April, and from the 21st of April to the 12th of May, she gave 167 quarts of milk more than the calf could take. After the calf was taken away, on the 13th of May, he saw the heifer milked, and she gave nearly 19 quarts, beer measure. She is half Durham, and weighed on the 20th March last ten hundred and fifty pounds.

ISAAC TABOR, Jr., of Topsham, Orange County, Vt., owns a cow which brought a calf a few days ago, that weighed the day it came, one hundred and twenty-one pounds. The cow is a native; the calf one-fourth Devonshire.

WILLIAM T. GEORGE, of the same place, has made the past year, (ending April 18, 1852), from the milk of one cow, four hundred and fifty-one pounds of butter. The cow is a native, of medium size; and thirteen years old.

For the New England Farmer.

COAL ASHES.

Will you or some of your correspondents inform me whether coal ashes can be used with any benefit in agriculture? M. C.

June 2, 1852.

Mechanics' Department, Arts, &c.

SAFETY SHIPS.

A correspondent of the *Scientific American* makes the following suggestion:

"Safety-ships have been constructed in England, divided into water-tight compartments. A variety of other plans have been suggested at different times, some of which are very good. Would it not be sufficient to place under the decks and between the beams, tubes or compartments of India rubber or gutta percha, connected with numerous pumps on deck, which might be inflated at a moment of danger so as to support the ship with ease? These tubes or compartments can be made to lie close against the ceilings, and be kept there by pieces of wood, pressed by a spring, which would give by pressure from within. The whole contrivance is simple, in no way inconvenient, might be ornamental, and of but little expense. How much more consoling to run to the pumps to inflate these tubes (one-half of which ought to be made sufficient to support the whole vessel,) than to set to work in anxiety and doubt, amounting to despair, to keep the water out of a leaking, sinking ship."

TUNNELING THE HOOSACK. — A correspondent of the *Springfield Republican* gives the following account of the state of operations at the projected Hoosac tunnel:

"The boring machine is on the ground, but as yet hardly resolved into its component parts. A mass of cast iron spokes, cogs, wheels, shafts, bolts, &c. &c., lay around us, out of which the workmen were slowly (for nearly every piece required a derrick and pulleys to get it into place,) re-constructing the ponderous wonder. The carriage for operating the machine is in place, facing a perpendicular side of solid rock, just off the actual line of the road, which has been prepared for the first actual experiment. The immense shaft was being hoisted into position, and then would come the wheel and its accompaniments, and then the driving power, which consists of engines of 100 horse-power, and for which a building was being erected. There have been many delays in getting the machine upon the ground, and in place, and we were told it would probably be six weeks at

least before everything would be ready for a start."

NEW MUSICAL INSTRUMENT.—Mr. Freberhuyzer, a musician of Albany, has invented a new musical instrument, the materials used for its construction being sea shells. The exterior of the shell is not disturbed, and retains all its rough attractions.—The mouth piece is fitted to a screw tube adjusted at the head of the shell. Along the sides the key holes are arranged at proper intervals, and the edges carefully lined. A valve lined with velvet, hinged at one corner, covers the mouth of the shell, and is compressed or opened as the character of the music requires. At the opposite and extreme corner of the mouth, the vent is left for the egress of the surplus air. The instrument, therefore, with the valves and keys closed, is air tight, and the variations in the size and natural organization of the shell, furnishes the change in the tone of the instrument. The music is said to be powerful and agreeable.

IMPROVED RAT TRAP.—An ingenious instrument has been invented by Mr. Seaward, a printer, at Indianapolis, Ind., which will be death on rats. To the treadle on which the bait is placed, is attached an iron lever, communicating with a wire spring, to which is fastened a sharp instrument, which revolves rapidly when the treadle is touched, hitting the rat between the pceptors and knocking it six or eight feet from the trap, which resets itself instantly for another rat.

A NEW POWER PRESS.—The Lebanon, N. H., *Whig* states that Mr. A. H. Cragin, of that town, who has been at work for the last year upon a power press, has completed one which works admirably, and is capable of throwing off from 1500 to 2000 impressions per hour. It is entirely new in its construction, simple and compact—being less than seven feet in length by four feet wide, and is to be afforded for about \$500.

Ladies' Department.

ANXIETY FOR CHILDREN.

None but affectionate, faithful parents themselves can estimate the tenderness and depth of anxiety which is felt in behalf of the child who has taken his departure from home to go and live and labor among strangers. As the fond mother puts in order the little wardrobe of her son, and overhauls every article of apparel, to see that no stitch is wanting, her eyes frequently fill with tears which she hastily wipes away, that she may not seem sad to her boy. She knows it is for the best that he should go, and she tries to appear cheerful and hopeful, that she may encourage him. And when the farewell hour comes she still tries to smile, and the father, too, summons his bravest look while the separation is taking place.

But when he is gone, and the stage or car is out of sight, how desolate seems that home. And why do the parents sit in silence and filled with anxious thought, or withdraw to the chamber of prayer, to commit their child to the keeping of the heavenly Father? Ah, they are thinking of the trials to which his moral principles may be exposed. They are contemplating the danger he is

in of meeting with evil company; they tremble to think that his youth and inexperience may be no match for the temptations and snares to which, in his new situation, he may be exposed. They are not so much concerned for his success in acquiring wealth, honor or influence, as they are for his preservation from the corruptions of the world; and many are the prayers they offer that he may be kept sustained.

While we write, how many thousands of affectionate parents are anxiously thinking about their absent sons, and earnestly hoping that they may be guarded against the evils which surround them. Now the question comes up to their minds, "Have we endeavored faithfully to instill the lessons of virtue into their young hearts? Have we warned them against the dangers of bad example and evil company, and the infirmities of their own nature?" And if not, then may such parents reasonably fear the worst. For after the best efforts of the best parents, there is still reason for anxiety in behalf of sons who have gone from beneath the watch and care of home.

As there is no anxiety like that of fond and faithful parents for their absent children, so there is no duty more sacred and imperative than that binding upon children away from home, to afford good grounds of hope and confidence to their parents, that they are conducting themselves prudently, virtuously, temperately, in company with the virtuous and the honorable only. Let every youth who may read this, examine himself that, if his parents could see and know everything concerning him and his habits of life, they could rejoice over him as a worthy, true-hearted son.—*N. Y. Organ.*

RECIPES FOR THE SEASON.

We publish below a few excellent recipes adapted to the season, taken mostly from Mon. Soyer's new work.—*Modern Housewife.*

RHUBARB SAUCE.—If the rhubarb has a green spotted surface, it is a kind that may be cut up without peeling; if the red sort, the peel must be torn off before it is cut up. Cut the stalk into a stewpan in pieces about an inch long, and add about half its weight of sugar with a little water and spicing if liked; set it over a sharp fire, occasionally shaking the stewpan round, and when quite tender, pour it into a bowl to cool.

RHUBARB PIE.—Strip the skin off the tender stalks of rhubarb, and slice them thin. Put it in deep plates lined with pie crust, with a thick layer of sugar to each layer of rhubarb. A little grated lemon peel may be added. Place over the top a thick crust; press it tight round the edge of the plate, and perforate it with a fork, that the crust may not burst while baking, and let the juices of the pie escape. Bake about one hour in a slow oven. Rhubarb pie must not be quick baked. Some stew rhubarb before making it into pies, but it is best without stewing.

FRENCH OMELETTE.—Break six eggs in a basin, and add a teaspoonful of chopped parsley, and one of spring onion, half a teaspoonful of salt, a pinch of pepper, a little grated cheese and enough of crumbled bread to thicken it slightly. Put into a frying pan an ounce or a little more of butter, when melted pour in the batter and stir round with a spoon as soon as it begins to set, lightly move it

to that part of the pan opposite the handle, so that it occupies one-third, hold it so that part of the pan is the lowest, with a spoon move the outside edges over towards the centre, and let it remain half a minute, so that it obtains a good color, turn it over on the dish so that the bottom is at the top. They must not be too much done, and served very hot. This is excellent but may require a little practice to cook perfectly. Cold meats well chopped are good in place of the bread crumbs.

Boy's Department.

AN EXAMPLE.

A young man, (says Sir R. Kane,) wanting to sell spectacles in London, petitions the corporation to allow him to open a little shop, without paying the fees of freedom, and he is refused. He goes to Glasgow, and the corporation refuse him there. He makes acquaintance with some members of the University, who find him very intelligent, and permit him to open his shop within their walls. He does not sell spectacles and magic lanterns enough to occupy all his time; he occupies himself at intervals in taking asunder and re-making all the machines he can come at. He finds that there are books on mechanics written in foreign languages; he borrows a dictionary, and learns those languages, to read these books. The University people wonder at him, and are fond of dropping into his room in the evenings, to tell him what they are doing, and to look at the queer instruments he constructs. A machine in the University wants repairing and he is employed. He makes it a new machine. The steam-engine is constructed; and the giant mind of Watt stands out before the world—the author of the industrial supremacy of this country, the herald of a new force in civilization. But was Watt educated? Where was he educated? At his own workshop, and in the best manner. Watt learned Latin when he wanted it for his business. He learned French and German; but these things were tools, not ends. He used them to promote his engineering plans, as he used lathes and levers.

RESPECT FOR THE AGED.

There is something venerable in age. In all nations the highest respect has been paid to it. The hoary head, says Solomon, is a crown of glory, if it be found in the way of righteousness. The patriarchs were a kind of Lares among the tribes of their descendants. Among the Egyptians, the young were obliged to rise up in the presence of the old, and on every occasion, resign them the most honorable seat. The Spartans borrowed this law from them, and rigidly enforced it among their youth. They never thought of its "breaking the spirit" of their rising warriors to require this submission. Job sets it down as a mark of deplorable degeneracy among his people, that they that were younger than he, had him in derision. It stands imperishably recorded as one of Heaven's high commands, that honor is to be given to father and mother. This, too, is the command "with promise"—a promised blessing to those who obey, but an implied curse, yea, a cutting off from the land, to those who disregard it. It has been sun-

posed that our republican institutions are not favorable to the growth of this spirit. There is the more need, then, that it be assiduously cultivated. The mind, even in infancy, should be deeply imbued with it. And "venerate the aged," should be, with our whole people, one of the fixed maxims of life, no one allowing himself any departure from it.—*Southern Presbyterian*.

FINANCIAL.—A teacher in one of our public schools, having occasion a few days since to punish one of his pupils for some misdemeanor, placed him on the platform to wait until he had heard some classes recite. The culprit took advantage of the teacher's engagement, and escaped from the school-house. The teacher, being somewhat vexed, promised another scholar a reward of twenty-five cents if he would bring the runaway back to the school-house; but before this was accomplished the boy who had escaped heard of the offered reward, and sent word to the teacher that he would "return and take the licking for twelve and one-half cents, cash down."—*Pawtucket Chronicle*.

Agricultural Cleanings.

THE CROPS.—The *Calais (Me.) Advertiser* of the 17th says:—The copious rains of Monday and Wednesday last, have materially changed the face of the fields and meadows, and everything now looks refreshed and invigorated, and the hopes and prospects of the farmer are much encouraged and strengthened.

In Louisiana, the crops are doing well, and the prospects now are for plentiful harvests. The corn crop will be overwhelming; some say corn will be two bits a bushel. The cotton, which has been somewhat retarded by cool weather in the latter part of the spring months, is now doing remarkably well.

A gentleman who has lately travelled through the counties of Jasper, Newton, Tyler, Jefferson, and Angelina, in Texas, says the crops in that section of country were never more promising than at present.

The crops in south-western Georgia are reported as unusually promising this year.

The Iowa papers concur in the opinion that notwithstanding the backwardness of the season, the wheat and other crops will be abundant. We have the same flattering representations from Northern Ohio, Indiana, Illinois, and the greater portion of Wisconsin and Michigan.

AN ANCIENT TREE.—The old oak, beneath whose branches Eliot preached to the Indians, at South Natick, in 1690, is still standing—a "hale green tree," and still affords a grateful shade to the weary traveller. A neat monument has been erected to the memory of Eliot near this place, which bears on one side his name, and on the other the title of his Indian Bible—"Up Biblum God."

AN EXTENSIVE CHEESE BUSINESS.—George Hezlep's great cheese factory, in Ohio, converts the milk of about 2,500 cows, belonging to farmers in the neighborhood, into the best cheese, by labor-saving machinery. The curd is made, sacked, and marked, by the farmer, and sent to the factory by a wagon which daily goes the rounds. Eight teams are thus employed. The curd is then weighed; sliced in a machine; then passed through the double curd-cooking apparatus; then through a machine which cuts it fine to powder, and salts it while passing through. It is then pressed, sacked, and again pressed. A machine sacks 240 cheeses per hour. The factory makes 300 cheeses daily, weighing about 5000 pounds. Nearly 400 tons are turned out yearly. We gather the above interesting facts from the *Western Christian Advocate*, published at Cincinnati.

SHEEP AND WOOL.—There are, according to the last census returns, 21,571,306 sheep in the United States and Territories, which annually produce 52,417,287 pounds of wool. Ohio and New York are the great sheep States, each producing over ten million pounds of wool, annually. Pennsylvania, Virginia, Indiana, Kentucky and Vermont stand next. The following are the sheep statistics of the New England States:

States.	Sheep.	Lbs. of Wool.
Maine.....	440,943.....	1,363,966
New Hampshire.....	381,757.....	1,108,476
Vermont.....	919,992.....	3,410,993
Massachusetts.....	189,651.....	585,186
Rhode Island.....	44,326.....	139,692
Connecticut.....	174,181.....	497,451
	2,152,820	7,091,734

A NICE FIELD OF BARLEY.—A correspondent of the *San Joaquin Republican*, California, writes from Fort Miller, Mariposa county, that Major Miller was about to commence gathering one of the most plentiful crops of barley—of between 200 and 250 acres—ever seen in California. "On this occasion, he calls in the males of five tribes, making a perfect Waterloo army of red-skins; his vegetables of all kinds are plentiful. The Major is doing much to civilize the Indians."

IMPLEMENTS.—A trial of agricultural implements to take place at Geneva, about the 20th of July, has been appointed by the New York State Agricultural Society. Prizes are offered for the best implements tested. Those designing to have articles at the exhibition, are requested to give notice to the chairman of the committee of arrangements, John S. Pranty, before the 10th of July.

COST OF MANURE.—It is said that the amount of guano annually used in Great Britain, for the last five years, has cost two million pounds sterling, or about ten millions of dollars—more than equal, yearly, to the cost of the Erie canal till its first completion. In addition, great quantities of lime,

bones, shells, and immense piles of yard manure, have been applied to the land.

SEVENTEEN YEAR LOCUSTS.—As was predicted last year, the seventeen year locusts have made their appearance in Connecticut. In 1818, and in 1835, their presence on a lot of land about 50 rods square, some three miles from the North Glastenbury post-office, is chronicled. The woods on that spot are now alive with their music.

STRAWBERRIES.—Jason Heritage, of Burlington county, New Jersey, says an acre and a half of ground, planted with strawberries, will this year yield him, clear, \$1000. Five hundred quarts were taken from the vines at one picking, on a little less than a quarter of an acre of land, which, at 50 cents a quart, yield \$250.

EARLY VEGETABLES AND FRUITS.—On the 19th, Dr. Tognio presented to the editor of the *Wilmington, N. C., Journal* two fine firmly-headed early York cabbages. Same day cherries were 20 cents a quart in Cincinnati, and the *Gazette* complained that strawberries were still 25 cents a quart.

Haying Tools.



1000 dozen superior Grass Scythes.

PHILLIPS, Mosser & Colby's—Darling's—Farwell's—Mansfield & Lamb's—Keyes & Dunn's.

Also, Lawn, Grain and Bush Scythes, of the best quality.

1000 dozen Scythe Sneaths.

Patent Grass, Lawn and Bush Sneaths, from the best manufacturers in the country.

2500 dozen Hay Rakes.

Hall's, Simonds's, Carpenter's, Page & Wakefield's, Robinson's, Duggan's and English best Hand Rakes.

500 Drag Rakes.

This Rake is a hybrid between the Hand and Horse Rake; every good farmer should have one or more.

3000 dozen Scythe Rifles.

Clark's celebrated Whetstone Grit and Emery Rifles. Also, Austin's, Anson's, Willard's, and others.

200 gross Scythe Stones.

Guinebaug, Chocolate, Norway Rag and Indian Pond; also, Woodward and Talacre (English) Scythe Stones.

20 tons Grindstones.

A well selected assortment of the celebrated Blue Sheet, warranted. Also, Grindstones of all sizes, mounted on frames and rollers complete.

Grindstone Fixtures, viz.: Flanges, Arbors, Cranks and Rollers.

800 Horse Hay Rakes.

Delano's Patent, Revolving and Spring Tooth Hay Rakes; all of which will be sold at wholesale or retail, at very low prices, by RUGGLES, NOURSE, MASON & CO., June 15. Over the Market, Boston.

Bound Volumes.

BACK VOLUMES of the NEW ENGLAND FARMER, elegantly bound in Muslin, Gilt and Embossed, are now for sale at this office.

Boston, March 20, 1853

The Farmers' Library.

JUST RECEIVED, the following assortment of Agricultural and Horticultural Books, embracing the standard works of eminent American and European writers, on the Farm, the Orchard, the Garden, &c. &c.

	PRICE.
American Farm Book, by Allen,	\$1.00
Farmer's Treasure, by Faulkner and Smith,	.75
Dana's Muck Manual,	1.00
Prize Essay on Manures, by Dana,	.25
American Muck Book, by Browne,	1.00
Lectures on Practical Agriculture, by Johnstone,	.75
Elements of Scientific Agriculture, by Norton,	.50
Principles of Agriculture, by Thaeor,	2.50
Practical Agriculture, by Johnstone,	.75
Agriculture for Schools, by Blake,	1.00
Catechism of Agriculture and Chemistry, by Johnstone and Norton,	.25
American Agriculturist, by Allen,	1.00
Liebig's Complete Work on Chemistry,	1.00
Farmer's and Emigrant's Hand Book, by Marshall,	.75
Home for all, by Fowler,	.50
Book of the Farm, by Stephens and Skinner,	4.00
Cottage and Farm Houses, by Downing,	2.00
Downing's Country Houses,	4.00
Rural Architecture, by Allen,	1.25
Downing's Landscape Gardening and Rural Architecture,	3.50
Downing's Cottage Residences,	2.00
Fruit Garden, by Barry,	1.25
Complete Gardener and Farmer, by Fessenden,	1.25
Bridgeman's Gardener's Assistant,	2.00
Bridgeman's Kitchen Gardener's Instructor,	.50
American Fruit Cultivator, by Thomas,	1.00
Gardener and Complete Florist,	.25
Florist's Guide, by Bridgeman,	.50
New England Fruit Book, by Ives,	.56
Yonatt and Martin on Cattle, by Stevens,	1.25
Rose Cultivator,	.38
Johnson's Gardener's Dictionary, by Landreth,	1.50
Rural Economy, by Bousseingault,	1.00
American Rose Cultivator,	.25
Rigelow's Plants of Boston,	1.25
Genera of Plants of the U. S., by Gray, 2 vols.	12.00
Gry's Botany,	2.40
Farnell's Chemistry,	1.00
New England Farmer, by Cole,	1.00
Ladies' Guide and Skilful Housewife, by Mrs. Abel,	.25
Hive and Honey Bee, by Richardson,	.25
Bee Keeper's Manual, by Miner,	.50
Bird Fancier, by Browne, paper 25 cents,	.50
Townley on Bees,	.50
American Poultry Yard, by Browne,	1.00
American Poultryers' Companion, by Bement,	1.00
American Fowl Breeder, by Moore,	.25
American Herd Book, by Allen,	3.00
American Shepherd, by Morrill,	1.00
Domestic Animals, by Allen,	.75
Diseases of Animals, by Cole,	.50
Hints to Sportsmen, by Lewis,	1.25
Dood's Anatomy and Physiology of the Horse,	1.00
Mason's Farrier and Stud Book, by Skinner,	1.25
Management of Sheep, by Canfield,	1.00
Yowatt on the Pig,	.50
Knowlton's Complete Cow Doctor,	.25
Horse Doctor,	.25
Guenon's Treatise on Milch Cows,	.38
Treatise on Hot Houses, by Leuchars,	1.00
Allen on the Grape,	1.00
London's Encyclopedia,	10.00
Schenck's Text Book,	.50
Breck's Book of Flowers,	.75
Downing's Fruit and Fruit Trees,	1.50
For sale at the Publishers' prices by RUGGLES, NOURSE, MASON & Co., Quincy Hall, (over the Market,) Boston.	
April 3, 1852.	tf

Pure Devon Stock.



COWS, HEIFERS, BULLS and BULL CALVES for sale.
Apply at Office of N. E. Farmer, or to the subscriber.

B. V. FRENCH,
Braintree, Mass.

Dec. 27, 1851.

1yr

Carrot and Turnip Seed.

WE HAVE FOR SALE,
1000 lbs. Orange Carrot Seed;
500 lbs. Yellow Ruta Baga Turnip Seed;
500 lbs. White Flat Turnip Seed;
Also,
300 lbs. Mangel Wurtzel Root Seed;
100 lbs. White Sugar Beet Seed;
All of which were grown expressly for us, and are of the best quality.
RUGGLES, NOURSE, MASON & CO.,
May 29. Over Quincy Market, Boston.

State Mutual Life Assurance Co. OF WORCESTER.

GUARANTEE CAPITAL, \$100,000.

Hon. JOHN DAVIS, President.

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Hon. STEPHEN SALISBURY, } Presidents.

THIS Company was chartered in March, 1844, and commenced business on the first of June, 1845. Its business is conducted on the most economical principles.

The well considered and invariable policy of this Company has been to prefer the safety and mutuality of the assured to the showy advantages of a large number of policies, and an imposing amount of receipts. California risks have been uniformly declined, and the multiplication of policies in cities considered especially liable to cholera has not been encouraged.

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Pamphlets, explaining the principles and advantages of life assurance, with forms of application and rates of premium, may be had by application at the Office of the Company in Worcester, or of the Agents in all the principal towns in New England.

Dec. 27, 1851.

CLARENDON HARRIS, Secretary.

1st

Mexican Guano.

A NEW ARTICLE is now offered to the Agriculturist and Dealers, under the above name, from its having been found near the Mexican coast. It has been analyzed by C. T. Jackson, M. D., State Assayer, Boston, Dr. David Stewart, of Baltimore, and others. Dr. Stewart says it contains the largest proportion of Phosphates he has ever met with in Guano.

The following are the result of the analysis made by C. T. Jackson, M. D.:

Water.....	33.40
Vegetable Matter.....	15.80
Soluble Salts (in Water) Phos. Soda.....	0.12
Phosphates of Lime and Magnesia.....	60.50
Insoluble Matter (Selex).....	0.10
	99.92

The quality of this Guano as a rich fertilizer, and the great reduction in price compared with the Peruvian, is such as to render it an object for the agriculturist and dealers to buy and give it a trial. It has been tried in the vicinity of Norfolk, Va., and much approved by the Farmers, those who are now buying and using of it freely. It may be obtained in lots to suit purchasers of A. D. WELD, 127 State Street, PHINEAS SPRAGUE & Co., T Wharf, or of P. A. STONE, who is the importer, and may be found at 15 Crescent Place, Boston, where also other information may be obtained respecting it. It is also for sale by Parker & White, 8 and 10 Gerrish Block, Blackstone Street, D. Prouty & Co., 19 North Market Street.

March 27.

Albany Drain Tile Works,

No. 60 LANCASTER STREET,—West of Medical College.

THE subscriber has now on hand, and will furnish to agriculturists, Horse Shoe and Sole Tiles of the most approved patterns, suitable for land drainage, of a superior quality, of over one foot in length. Horse Shoe Tile 2½, 3½ and 4½ inches calibre, at \$12, \$15 and \$18 per 1000 pieces. Sole Tile 2½ and 3½ inches calibre, at \$12 and 18 per 1000 pieces. They are so formed as to admit water at every joint, draining land from 12 to 20 feet each side of the drain, being the cheapest and most durable article used. The great importance of thorough drainage is daily becoming more apparent.

Orders from a distance will receive prompt attention.

Albany, N. Y., April 10. 12w—6 JOHN GOTT.

NEEDHAM'S

White Blackberry Plants.

THIS new variety of the Blackberry is intended expressly for the garden, being hardy, vigorous and extremely productive.

Persons favoring me with their orders, will have them grown from the original. The plants can be sent to any part of the country, packed in boxes, at \$10 per dozen, or single plants \$1.

For sale by Ruggles, Nourse, Mason & Co., and by the subscriber,
J. S. NEEDHAM,
March 27, 1852. 1f Danvers, Mass.

New Store and New Goods.

THE subscriber would inform the inhabitants of Framingham and vicinity that he has opened a store in HOWE'S BLOCK, SOUTH FRAMINGHAM, and has for sale at the lowest prices for cash, an assortment of Family Groceries, Crockery Ware, Fancy Goods, Hardware, Paints, Oils, &c.

CHARLES J. POWER.

South Framingham, Nov. 1 1851.

44—1f

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Bolton Grey Fowls.



if
All orders promptly attended to.
June 5.

Eggs of these fowls, which are noted for their beautiful appearance, non-sitting and good laying qualities, warranted as pure as any in the country, can be obtained by applying, (post-paid,) to GEORGE DORR, Dorchester, Mass.

Suffolk Pigs.



Those who wish to procure SUFFOLK PIGS for breeders, (warranted pure and very fine,) can be supplied at short notice by applying at this office.
May 1, 1852.

Garden Seeds.

WE respectfully solicit the attention of purchasers of GARDEN SEEDS to our extensive stock, which we offer for sale. We have all the sorts of Vegetable Seeds that have proved worthy of cultivation; also, Grain, Grass and Flower Seeds. All the varieties are raised and selected expressly for our trade, and we do with confidence recommend them to all who desire to procure seeds that will prove true to their names.

Catalogues gratis, on application.
RUGGLES, NOURSE, MASON & CO.,
Jan. 1. Over Quincy Market, Boston.

Ayrshire Calves.



For sale at moderate prices, two full blood Ayrshire Calves, one 9 months and the other 2 months old.
Apply at office of New England Farmer.
May 23, 1852.

McCORMICK'S PATENT

Virginia Reaper and Mower.

THE subscriber proposes selling the above machines upon the following Terms of Warranty, viz: That they are well made, of good material, durable with proper care, and not liable to get out of order, and that the Reaper will cut one and one-half acres of grain per hour, and do its work better than ordinary cradling; and the Mower is warranted to cut one and one-fourth acres of grass, (of all kinds,) per hour, and do its work as well and as close to the ground, on smooth land, as ordinary mowing; otherwise the purchaser is under no obligation to pay for the machine.

Price for Reaper and Mower.....\$150.
Price for Mower alone.....\$105.

Payable after a satisfactory trial of machines.

For further particulars, address (post-paid,)

A. D. HAGER, General Agent for
Proctorsville, Vt., May 1, 1852. 3w*1 New England.

The Massachusetts Militia,

AND all other Soldiers of 1812, '13 and '14, or in case of their death, their widows and minor children, can obtain Land Warrants, on application to the subscriber.

ILLINOIS LAND TITLES, granted to soldiers of the war of 1812, will be purchased.

Apply to EBEN SMITH, JR.,
Feb. 7, 1852. 6m 20 Court Street, Boston.

NEW ENGLAND FARMER

Is published on the first of every month, by JOHN RAYNOLDS and JOS. NOURSE, at Quincy Hall, South Market St., Boston.

SIMON BROWN, Editor.

FREDERICK HOLBROOK, } Associate
HENRY F. FRENCH, } Editors.

Terms, \$1.00 per annum in advance.

All subscriptions to commence with the volume, Jan. 1.

The FARMER, is devoted exclusively to Agriculture, Horticulture, and their kindred Arts and Sciences; making a neat volume of 576 octavo pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at the office of publication.

Also published at the same office every Saturday, on a large handsome folio sheet, the

NEW ENGLAND FARMER, (WEEKLY,)

An Independent Agricultural Family Newspaper.

The News and Miscellaneous departments under the charge of WILLIAM SIMONDS, will include a full and careful report of the news of the Markets, and the news of the week, such as Domestic, Foreign and Marine Intelligence, Congressional and Legislative proceedings, Temperance and Religious Intelligence, and a general variety of Literary and Miscellaneous matter, adapted to family reading, comprising more useful and valuable reading matter than any other Agricultural Newspaper published in New England. Everything of a hurtful or even doubtful tendency will be carefully excluded from its columns.

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The monthly contains nearly the same matter as the Agricultural department of the weekly.

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All orders and letters should be addressed, post-paid,

RAYNOLDS & NOURSE,

QUINCY HALL, SOUTH MARKET STREET, BOSTON.

The postage on the New England Farmer, monthly, is as follows:

For any distance not exceeding 50 miles	5 cents per year.
Over 50, and not exceeding 100 miles	10 cents per year.
Over 100 " "	15 " "
Over 200 " "	20 " "
Over 300 " "	25 " "
Over 400 " "	30 " "

To prevent any misunderstanding, we quote the 16th section of the law of 3d March, 1845, which is as follows:

Sec. 16. And be it further enacted, that the term "Newspaper," herein before used, shall be, and the same is hereby defined to be, any printed publication, issued in numbers, consisting of not more than two sheets, and published at short stated intervals of not more than one month, conveying intelligence of passing events, and bona fide extras and supplements of such publication.

RAYNOLDUS & NOURSE, PROPRIETORS.
OFFICE....QUINCY HALL.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

FARM WORK FOR AUGUST.

"The eighth was August, being rich array'd
In garment all of gold down to the ground;
Yet rode he not, but led a lovely mayd
Forth by the lily hand, the which was crown'd
With ears of corn, and fall her hand was found."

The Roman senate complimented the emperor Augustus by naming this month after him; and through the Romans it is denominated by us *August*. Our Saxon ancestors called it "*Armonat*," (more properly *barn-moneth*;) intending thereby the then filling of their barns with corn.

The harvest in England was principally gathered in August; the rye, oats, barley, wheat, peas, beans, &c.; while our great harvest, the INDIAN corn, is extended into October, and even November.

Although another month of summer is left, its former beauty, youth and freshness have departed, and the withering touch of age may be seen through all the late gay parterre. The number of flowers is sensibly diminished. But that the change may be gradual, as in all things else, there are some still springing into blossom—the polyanthus-es, mignonetta, capeiums and china-asters. And as a compensation for the loss of our lovely friends, the quantity of fruit is greatly multiplied, the apricots, the peaches, pears and grapes; the wild berries are abundant, and the garden raspberries, currants, thimbleberries, gooseberries and blackberries.

"The garden blooms with vegetable gold,
And all Pomona in the orchard glows,
Her racy fruits now glory in the sun,
The wall enamored flower in saffron blows,
Gay annals their spicy sweets unfold,
To cooling brooks the panting cattle run:
Hence the forerunner of the farmer's gain,
Violets his dreams and multiplies the grain."

But we must restrain our Pegasus, and speak for a moment upon what is with most farmers

A COMMON ERROR. — Haying is an exciting, as well as an interesting business. All hands turn out early with bright morning faces and cheerful greetings, for it is understood that everybody is to be good-natured while haying lasts! The mower

times his sturdy strokes to the blithest notes of the lark, or if near enough to hear them, to the merry plashings of the dasher in the churn. The women catch the inspiration, and sing while they serve up the hot rolls and coffee for the hungry hay-makers. Ah! there is real enjoyment in this delightful occupation. A good man lives a long while in haying time. And this enjoyment is the reason why he neglects some other things. While the men mowed, the women sang over the rolls and coffee, and the boys were milking and raking, the weeds—knowing they were not watched—grew tremendously. The garden, the corn and potato field, and even the strawberry patch, have been transformed, if not as by Midas' touch into gold, by some other potent power into a forest of weeds. Hasten, then, to exterminate them; if they seed, there is a crop sown for ages. But this after crop is not the only evil; these weeds make immense drafts upon the soil, and thus deteriorate your crop. Better suffer the meadow to remain uncultivated a day or two, than let the weeds triumph.

LAYING DOWN GROUNDS.—There is no better time than August to plow and lay down old grass land, or to reclaim swamps and meadows. It requires but a single year to change the most incorrigible land into a productive field, if too much is not undertaken at once, and the right process is adopted. The work is usually attempted with plows too light and teams too weak. In trying to gain a sufficient depth, one gets broken and the other tired, and then comes the contest of doubts whether it will ever pay to reclaim an old meadow or plow deep and subsoil the upland. Well, this is just as the mason operates, who builds a thin, cheap wall, and finds it tumbling down upon himself, perhaps, before he is fortunate enough to get away from it; or the farmer, who erects a cheap house, and in the course of a twelve-month goes to patching and altering, and subjects himself to an expense much greater than it would have been to do the work thoroughly at first. No. In reclaiming lands, the

first care should be to put in plows and teams strong enough to turn a furrow ten or twelve inches deep and cut all small roots, without straining either team or plow. There is no wear and tear of spirit in this, and your good nature will hold out until the last furrow is turned in such an operation. It is cheaper, too, than to haggle with it, fret the team, spoil the furrow, and find the work at length only half done!

When the land is properly plowed, roll it with a heavy roller, spread fine manure freely, and then follow with a light, sharp-toothed harrow, drawn by horses, and urge them to a lively walk. This operation will cut an immense number of roots, and bring the surface into a fine, deep tilth, altogether unlike that effected by a heavy harrow dragged along at a snail's pace by oxen.

There is one point in laying down grounds of sufficient importance to merit a separate paragraph—and that is the *quality* of the manure applied. The smaller the seeds to be sowed the finer should be the manure. It ought to be old, thoroughly decomposed and pulverized; and where such is freely applied and incorporated with the delicate tilth made by the quickly-moved and sharp-toothed harrow, little complaint will ever be heard of grass being winter-killed. In a soil thus prepared, the minute seeds find all things necessary for a quick and healthy germination and rapid growth. The air, light, heat and moisture are admitted in such proportions as the seeds require to give them a sure and early start. Thus by deep plowing, fine manure and thorough cultivation, little or no loss is sustained in seed, while a good crop is quite certain, let the succeeding season be either wet or dry.

Land in corn may be laid down by sowing the seed at the last hoeing and covering it with the hoe or the hand rake. We have laid down land in this way with excellent results.

Budding.—This month is the suitable time for budding apples, pears, peaches, plums, apricots, &c. High and clean cultivation is as necessary in the nursery as anywhere else. The process of budding is familiar to most persons, and has been fully described in our former volumes. It is simple and easy, and all boys on the farm should practice it. Select the best kinds of fruit.

THE GARDEN.—Farmers, generally, are not in the habit of sowing garden seeds in this month—yet if the season be favorable, cabbages sowed now will do well for late autumn and winter use. So will turnips, celery, and lettuce for fall use. Hoe well and suffer no weeds to go to seed.

SEEDS.—Look out for your seeds to gather them as they ripen—the birds will do it if you do not. The best turnip, carrot, onion, parsnip and other seeds require daily attention.

UTA-BAGAS.—This is an exhausting crop and will undoubtedly be increased and the land sus-

tained by the application of ashes and plaster. According to BOUSSINGAULT the ruta-baga contains nearly 42 parts of potash out of 100; 13½ of lime, and the same of sulphuric acid.

Professor JOHNSTON states that in a crop of 20 tons or 45,000 lbs., there are 900 lbs. of thick or woody fibre, 4000 lbs. of starch, sugar, gum, 670 lbs. of fat or oil, and 300 lbs. of saline matter.

ARMY WORM.—Visit your young apple trees, and where you find these worms foraging on forbidden ground, break their thick ranks by turning a platoon of small, arms or fingers, upon them, and make them "bite the dust." They are active now and very destructive, cutting clean as they go.

Cows.—During the hot weather of August, milch cows require much water, and if possible should have access to pure, sweet water at all times during the day. They are something like their owners in one respect, like to drink when they are thirsty, and we do not think it yielding too much to their taste to indulge them in this particular.

For the New England Farmer.

LUSUS NATURÆ.

BY CHARLES SIDGROW.

On the 6th inst., I noticed two white blossoms on an apple tree in my garden after all the others had fallen off, but was then prevented from examining them. The following day one of my pupils picked one of those blossoms and showed it to me. I was not a little astonished to see, that this blossom was double. It was 2 1-2 inches in diameter; perfectly white and as full as the flowers of the double Oleander (*Nerius Splendeur*.) It resembled in its form and structure a Camellia. I found, on examination, the other blossom not quite so full as that one described. Both proceeded from a fruit spur at the very end of a small limb, laden with fruit. I marked, of course, the fruit spur, and shall try to propagate it in some way or other. Should I succeed in this, it would make a beautiful addition to our flowering trees.

Lancaster.

c. s.

MACHINE FOR PICKING STONES.

There is no end to inventions. One could hardly believe that the reaping and mowing machines would perform their work until he had seen it done with his own eyes. Then there is the machine for cutting enormous blocks of marble with toothless saws, and for hewing granite with precision and rapidity. And now, after our back has ached over many a thickly-strown field through many a weary day, comes the machine for picking stones. It is a large cylinder on a common axle and cart wheels containing four rows of teeth or lifters. Gearing on the hubs of the wheels and on the ends of the cylinder gives the latter a rotary motion, when the teeth pick up the stones and deposit them in a box. When the box is full, the cylinder is raised and the load carried off and upset as from a common cart. What shall we have next!

For the New England Farmer.

HOW TO STUFF BIRDS.

BY H. F. FRENCH.

MY DEAR BROWN:—In a recent number of the *Farmer*, in reply to a correspondent who asks information on the above subject, you refer to me, as one skilled in the art of *Taxidermy*, and willing to impart knowledge to others. Now there are many things very easily done, by those who *know how*, and yet very difficult to teach by pen and ink, to those who have no idea of the process.

If you doubt the truth of the proposition, sit down some pleasant morning, and describe the process of *editing a newspaper*, so that we can all understand it as well as you!

I flatter myself that I can skin and stuff a bird so that he will look, as the artist said of his portrait, *a little more natural than life*, and enjoy as much of *immortality* as bones and feathers are susceptible of, but whether I can set the process down, so that all your readers can go and do likewise, remains to be seen. I made my collection, of about a hundred New Hampshire birds, between 1835 and 1838, and they remain as perfect as when just completed.

I have delayed answering your correspondent, hoping to find in some printed book directions on the subject, that might save me the trouble of writing, but not one word do I find, and as I had no teacher myself, I dare say that they who have skill in such matters may smile at my awkwardness. To any such, I would say that if they could only see the big Washington Eagle, which looks down from the top of a book-case, with such a patronizing air upon me as I write, ready to lend me a quill *two feet long*, in case of emergency, they would be glad to laugh on our side.

As in the case of a duel, the preliminaries are longer than the actual fight, so the preparations for stuffing the bird are the larger half of the work, at least on paper.

ARSENICAL SOAP.

To preserve the skins of animals from putrefaction and from insects, *arsenic* is the substance generally used. Many persons use it in the form of dry powder, as sold at the shops. I have used a preparation, called arsenical soap, made of one-third white bar soap, and two-thirds arsenic, warmed so as to melt together over a slow fire, with an ounce of camphor gum added, just before the mixture cools. It is applied to the skin, *inside* of course, with a brush, like *lather* to one's chin.

IMPLEMENTS.

For tools, a sharp knife with a flat ivory handle, like a budding knife, a pair of cutting forceps, a pair of pincers, and a pair of small tweezers, such as watchmakers use, will be found convenient. Annealed iron wire, of various sizes, according to the victim to be sacrificed, will be required to support the birds, when mounted, and a quantity of *tow* for stuffing. Cotton will not answer the purpose, because, as every girl who ever made a pin-cushion can tell, it is difficult to thrust even a sharp wire through it.

HOW TO KILL A BIRD.

It is quite an easy matter, to shoot a bird, and most birds *must* be shot, but often living birds are brought to us, and as one would dislike to skin them alive, it is necessary to kill them in a proper

and becoming manner. You can easily wring their necks, or cut their heads off, but since feathers are considered somewhat ornamental to birds, this kind of violence will not do. Blood can be easily washed off of *water birds*, but not from *land birds*, so conveniently. *Poison* will not affect birds of prey, such as hawks and the like. I gave my eagle a teaspoon full of *prussic acid*, and instead of dying of it, he seemed rather refreshed.

The scientific mode of murdering the poor innocent creatures, if they are not too large to handle, is to *pinch them with the thumb and fingers under the wings* so as to stop respiration, and as gentle Isaac Walton says, in directing how to put a live frog on to a fish hook, "in so doing, handle him as if you loved him." Byron says, by the way, that Walton was "a quaint, old, cruel coxcomb," and that he deserved to have "a hook in his gullet"—"with a small trout to pull it." If any one objects to having birds killed, he "had better stop," as the Irishman said, "*before he begins*" his collection.

HOW TO SKIN AND STUFF HIM.

Stop the mouth, nostrils and shot holes with cotton, to prevent the flow of blood. Lay the bird on its back, part the feathers on the breast, and cut through the skin from the breast bone nearly to the tail. If the blood flows, use powdered plaster, or something better, if you know what it is, to absorb it. Separate the bone of the wings at the joint, from the breast-bone. Cut off the neck, close to the breast. Separate the leg bones from the body, leaving the bone in the bare part of the leg, and one joint above, and take the body out. Put in some cotton or tow to prevent the skin from sticking together. Turn the neck wrong side out, till you reach the skull, and cut away the neck and enough of the skull bone to lay the brain bare, which is to be removed, as well as the *eyes*, on the inside. Apply the arsenic and stuff the head and neck with *tow*, as you turn it back.

By this time, the subject will have lost all resemblance to the bird *he was*, and it will seem almost as hopeless to make a cabinet ornament of his mortal remains, as to make him fly and sing again, but he will soon improve.

Take a piece of wire about a third longer than the bird, and bend it, so as to form a loop near the middle, and file each end sharp. Thrust one end through the neck and out through the forehead, and the other through the tail. Thrust another down inside of each leg, between the skin and bone, through the sole of the foot, and twist the upper ends round the loop, and wind a thread or some tow round the leg bone and wire inside the skin. These are to support the bird on his perch, and must be firm. Twist another wire, to form a cross with the first, and confine it at the loop, and thrust it under the skin of the wings. This wire, which is to support the wings, may be omitted in very small birds, and perhaps in all, except those which it is desired to put into very *rampant* attitudes, the skin of the wing being strong enough, when dry, to keep the wing in place. Open the skin of the wing underneath, and remove the flesh, and apply arsenic to the bones and skin.

Finish stuffing, and sew up the cut in the skin, and any other accidental holes, with a fine needle and thread; find some sprightly posture in an en-

graving, or imitate nature, if you can, and having smoothed his dress, and arranged him to your fancy, on an artificial stone made of a pasteboard form, sanded, or on a twig, or block, you may consider him finished, except the eyes. These are of glass, and can be procured, of all sorts, in Boston. They may be put in at any time, by moistening the eyelids.

In arranging birds in a cabinet, of course, one will put *the best side out*, just as the ladies put the trimming on the *congregation side* of their bonnets, and there are various other little innocent "tricks of the trade," such as supplying a few feathers from another bird of the same species, or even a wing or leg, if necessary, that will occur to a youth of genius.

As food for reflection to those who see in such pursuits—pursuits which filled the soul of such men as Wilson and Nuttall and Audubon—nothing worthy of the attention of rational men, let me quote, in conclusion, a few lines from Boker's "Calaynos."

"He! why to him the gay are butterflies,
Fitting around a light, of which they die.
He looks on pleasure as a kind of sin;
Calls pastime waste-time. Each to his trade say I.
I heard a man who spent a mortal life
In hearding up all kinds of stones and ores,
Call one, who splitted dies upon a pin,
A fool, to pass his precious lifetime thus.
What might delight you, lady, may not him;
And yet your pleasures argue you no fool,
Nor his grave brows prove a philosopher."
Exeter, N. H., June, 1852.

H. F. F.

For the New England Farmer.

THE WEATHER.

DEAR SIR:—Enclosed you have a memorandum for June of the degree of heat at sunrise, at 12 o'clock, and at sundown, and occasionally at 2 o'clock, when the heat was unusual.

	At sunrise.	At 12 o'clock.	At 2 or 3.	At sundown.
1	64	78	90	68
2	65	83	90	64
3	68	80	90	69
4	62	84	90	56
5	46	62	90	64
6	42	Frost in	72 low grounds	60
7	54	76	90	63
8	61	70	90	66
9	65	70	Rain $\frac{1}{2}$ inch.	68
10	52	78	90	62
11	45	66	90	60
12	44	Frost in	70 low lands.	56
13	48	81	90	66
14	51	86	98	74
15	69	80	98	79
16	74	96	90	82
17	73	84	90	73
18	64	Rain $\frac{1}{2}$ inch.	86	74
19	64	85	92	72
20	62	88	90	70
21	68	86	90	73
22	64	82	Rain $\frac{1}{2}$ inch.	64
23	74	76	90	58
24	48	78	90	64
25	70	68	90	58
26	54	77	90	66
27	54	81	90	68
28	67	86	90	70
29	78	89	90	68
30	65	86	Rain $\frac{1}{2}$ inch.	70

You will perceive we have had a little short of two inches of water during the month of June, which is less than half we need to keep as wet as we wish.

We have had a degree of heat which is unusual; the thermometer has been over 80° sixteen days of the thirty. When the degree of heat is so great we want four inches of water, at least, during thirty days. We have not had two-thirds the rain, in

Sherburne, that the towns west and north of us have had.

I would remark that my thermometer is kept on the north side of the house, which faces the south, upon the wall of the house, and situated on a rise of land. My thermometer never rises so high in summer, or falls so low in winter, as some in town; the reason, I suppose, to be, the land is higher, but not on a hill.

Should you see fit to publish this record in the *New England Farmer*, it would be convenient for those who get the work bound, for reference.

Respectfully yours,

Sherburne, July 8, 1852.

DANIEL LELAND.

REMARKS.—We not only "see fit to publish" the communication of our correspondent, but to express our thanks for an article requiring so much care and attention, and which is in itself exceedingly interesting.

POTASH WATER FOR APPLE TREES.

Major WHEELER, of Framingham, in this State, has apple trees which, for beauty of form and thrift, are not surpassed by any trees we have ever seen. He is an enthusiast about trees; loves them as men do their children, almost, and knows how to cultivate them so as to get a rapid growth and large crops. Well, the Major uses potash water as a wash for his apple trees, of the strength of a pound of potash to a gallon of water. He informs us that he has used this wash with happy results, for more than forty years, and that he was, probably, the first person who introduced it in this vicinity. In a note he informs us that he does not think Mr. Batchelder's trees, recently spoken of by Mr. Coffin in these columns, were injured by the wash, but by the severity of the winter, or from some other cause.

Our attention was called, both last fall and spring, to young apple trees which had been washed with potash water, some of which were dead, and all had the appearance of being seriously injured. It is possible that in some particular condition of the tree, this wash may have a fatal effect which it would not have upon its general condition, but if so, would not a "forty years' experience with Major Wheeler have hit that peculiar state of the tree more than once?

Will Mr. COFFIN be kind enough to communicate to us a more particular account of the trees he mentioned in a former communication? State their age, the manner in which they have been cultivated, the kind of soil in which they grew, and whether there were any indications of injury from the cold, or from any other cause, previous to the application of the potash water. If the potash water "takes off the moss, kills the borers, and promotes the health of the tree," as Major Wheeler and others state, it is an important article. But we need a wider comparison of practice and observation, and must give the subject more attention.

For the New England Farmer.

BIRDS.

BY CHARLES SIEDHOF.

THE ROSE-BREADED GROSSEAK.—(*Coccythraustes ludoviciana*—*Loxia ludoviciana*—*Loxia rosea*.)

I consider it as a great merit of this highly valuable paper, that it advocates so strongly the protection and preservation of birds. Having been accustomed to devote my attention to ornithology from childhood, I was enabled, while in Germany, to publish a book on the *singing birds* of that country. My object was not so much to improve on the system as to investigate and show the individual characteristics and manners of the species, tribes and genera. For this purpose I was always surrounded by several hundreds of living birds, kept in a suitable room adjoining my study. Two windows, put in the wall between said room and my study, enabled me to watch and observe them carefully. Immediately after my arrival in this country, I resumed this beautiful occupation, and opened a correspondence with the greatest American ornithologists. This may be enough either to justify or excuse my writing on birds.

Last winter I expressed, in a lecture before the Lyceum, my strong conviction that no bird ought to be destroyed but the *birds of prey*, excepting from them the *owls*, which chiefly live on mice and moles. They compensate a hundredfold the damage they sometimes do in the orchard or field by the destruction of myriads of insects and grubs they eat. Is it wrong and unjustifiable to shoot birds for the *sake of pleasure*, what must a man with a sensible heart feel, when he hears the report of guns in the *breeding season*? Parents and teachers, who allow your sons or pupils to kill birds, especially in the months of May, June, July and August, and to deprive the poor young ones of their parents that nurse and feed them, *are you Christians*? Do you not see the extreme cruelty, for which you will have to account some time!—Can you bear the thought, that your children should be left to starvation after your death? Can you, who permit that, pray to your God, and hope to find mercy with him, who have no mercy with his creatures? My heart aches in hearing the firing of guns every day in my neighborhood.

Still I have to return to the rose-breasted grosbeak. This most elegant bird is said to inhabit the remote regions of the Rocky Mountains, Canada, Newfoundland, &c. In 1847 I observed a pair at Newton Centre, in a wood between the Theological Institution and the Worcester Turnpike, but could not find the nest. Wilson knows nothing about it; Nuttall refers to Bonaparte, who says, "the nest was built amidst the thick foliage of the forest;" Audubon asserts it was found near the water edge. It is clear in itself, that very little confidence can be placed in such statements. Audubon's merits in his representations of the American birds are far above my praise; as a critical ornithologist, however, he has no great claim, so far as my personal observations extend. His imagination was very powerful, and carried him not unfrequently away. It is out of place to prove this *here*; still I can prove, that he relies too much on his predecessors, especially on Wilson, whose errors he unhesitatingly repeats, and which he thus corroborates.

After I had seen the pair of the rose-breasted grosbeak, and being at a loss where to find their

nest, I wrote to my excellent friend, SPRINGER F. BAIRD, then Professor of Natural History in Carlisle, Penn., but could not obtain any information, he being entirely unacquainted with the nest of the bird.

As I have been lucky enough to introduce the rose-breasted grosbeak from the out-of-the-way regions of the Rocky Mountains as a townsman of Newton Centre, so I am so fortunate as to introduce him as a townsman of Lancaster. I not only met with half a dozen of pairs, but succeeded in finding a nest, containing four eggs, on the 24th inst. The voice and song of this bird are superior to all American birds, except the ferruginous thrush, (*orpheus ferrugineus*;) but living in the depth of the secluded forest, it has hitherto escaped the notice of the ornithologists.

Lancaster, Mass.

C. S.

For the New England Farmer.

APHIDES AND ANTS.

MR. EDITOR:—Your relation to your readers is very much like a common school teacher's to his pupils. A teacher is supposed to know everything, and to be able to explain everything to the satisfaction of his pupils; and, moreover, they feel, that they have a perfect right to go to him for an explanation of all difficulties in relation to their studies, whether he has leisure to attend to them or not.

Now, what I want to know, is, what connection (if any) exists between the *aphis* and the *ant*? On all my best fruit trees, the most vigorous and thrifty ones, the aphides abound; and a multitude of ants are daily seen running up and down in a great hurry. On the extremities of all the tenderest twigs, the two may be seen in close connection, if not in direct contact, busily doing something, what, I cannot tell. If I disturb the ants in their operations, they immediately assume a belligerent aspect, appear to be in a great fury and ready for fight. They seem determined to stand up in their own defence, and to let me know, that they do not mean to be disturbed with impunity, while they are minding their own business and not interfering with the rights of others. Now, I wish to know, also, whether there is any *lawful*, cheap and easy way of putting a stop to their operations on large fruit trees? If, however, you shall make it appear that the *ant* subsists upon the *aphis*, I should not think it best to issue a *writ of injunction*.

MOUNT GRACE.

Warwick, July 12, 1852.

REMARKS.—If more attention were given to the organic life about us on the farm, or, indeed, to all the wonderful operations of nature with which we are concerned, there would be less dissatisfaction with rural life, while the mind would be gradually filled with the most pleasing and useful information. We thank "Mount Grace," not only for the observations he has made, but for communicating them to us. His queries introduce a subject most intensely interesting, a better knowledge of which would be profitable were it only for the gratification imparted to an inquiring mind.

On the tender shoots of the young apple trees,

the points of the branches which have grown the present season, most persons have undoubtedly noticed numbers of a small green insect, and in company with them and very busily engaged, numerous black ants, travelling back and forth as though they were engaged on some important mission. The green insects, or aphides, we have examined under the microscope, and found the hour devoted to them most happily spent. In addition to the antennæ, or feelers, we found on these insects two beautiful brushes, or feathers, projecting nearly perpendicularly from the top of the head, and movable in any direction. On the extremity of the body were two black tubes, blunt like the end of the fore-finger, of the use of which we had no sort of idea at the time of the examination. In taking a common pocket magnifier to the tree and watching through it the movements of the ants, we found them licking or feeding upon something which always seemed to be present where the aphides were. And this, undoubtedly, is the fact. We are happy, however, to yield the imperfect description which we should only be able to give, to one better versed on these subjects than we can ever hope to be. In the work on Insects injurious to Vegetation in Massachusetts, in Professor HARRIS' lively and attractive style, we find the following interesting relation; and for which we feel confident our readers will be no less thankful to the writer than we are ourselves:—

"The genus to which plant-lice belong is called *aphis*, from a Greek word which signifies to exhaust. The following are the principal characters by which they may be distinguished from other insects. Their bodies are short, oval, and soft, and are furnished at the hinder extremity with two little tubes, knobs, or pores, from which exude almost constantly minute drops of a fluid as sweet as honey; their heads are small, their beaks are very long and tubular, their eyes are globular, but they have not eyelets, their antennæ are long, and usually taper towards the extremity, and their legs are also long and very slender, and there are only two joints to their feet. Their upper are nearly twice as large as the lower wings, are much longer than the body, are gradually widened towards the extremity, and nearly triangular; they are almost vertical when at rest, and cover the body above like a very sharp-ridged roof.

"Plant-lice seem to love society, and often herd together in dense masses, each one remaining fixed to the plant by means of its long tubular beak; and they rarely change their places till they have exhausted the part first attacked. The attitudes and manners of these little creatures are exceedingly amusing. When disturbed, like restive horses, they begin to kick and sprawl in the most ludicrous manner. They may be seen, at times, suspended by their beaks alone, and throwing-up their legs as if in a high frolic, but too much engaged in sucking to withdraw their beaks. As they take in great quantities of sap, they would soon become gorged if they did not get rid of the superabundant fluid through the two little tubes

or pores at the extremity of their bodies. When one of them gets running-over full, it seems to communicate its uneasy sensations, by a kind of animal magnetism, to the whole flock, upon which they all, with one accord, jerk upwards their bodies, and eject a shower of the honeyed fluid. The leaves and bark of plants much infested by these insects are often completely sprinkled over with drops of this sticky fluid, which, on drying, become dark colored, and greatly disfigure the foliage. This appearance has been denominated honey-dew; but there is another somewhat similar production observable on plants, after very dry weather, which has received the same name, and consists of an extravasation or oozing of the sap from the leaves. We are often apprized of the presence of plant-lice on plants growing in the open air by the ants ascending and descending the stem. By observing the motions of the latter we soon ascertain that the sweet fluid discharged by the lice is the occasion of these visits. The stems swarm with slim and hungry ants running upwards, and others lazily descending with their bellies swelled almost to bursting. When arrived in the immediate vicinity of the plant-lice, they greedily wipe up the sweet fluid which has distilled from them, and, when this fails, they station themselves among the lice, and catch the drops as they fall. The lice do not seem in the least annoyed by the ants, but live on the best possible terms with them; and, on the other hand, the ants, though unsparing of other insects weaker than themselves, upon which they frequently prey, treat the plant-lice with the utmost gentleness, carressing them with their antennæ, and apparently inviting them to give out the fluid by putting their sides. Nor are the lice inattentive to these solicitations, when in a state to gratify the ants, for whose sake they not only seem to shorten the periods of the discharge, but actually yield the fluid when thus pressed. A single louse has been known to give it drop by drop successively to a number of ants, that were waiting anxiously to receive it. When the plant-lice cast their skins, the ants instantly remove the latter, nor will they allow any dirt or rubbish to remain upon or about them. They even protect them from their enemies, and run about them in the hot sunshine to drive away the little ichneumon flies, that are forever hovering near to deposit their eggs in the body of the lice."

HILLSBOROUGH COUNTY FAIR.

The Annual Exhibition of the Hillsborough Agricultural Society will take place at Nashua, N. H., on the 29th and 30th September next. The editor of the *Granite Farmer* says "the influence of the previous fairs of the society are readily to be seen in the improved cultivation of farms and in the introduction of improved breeds of cattle and horses." The Hillsborough Society has a vitality about it which would prove beneficial to many other similar associations. Like merchants and manufacturers, they consider a day devoted occasionally to the discussion of their affairs as profitably spent, and consequently continue their meetings beyond the winter months. May we all profit by the good example they afford us.

For the New England Farmer.

GENTLEMEN:—The accompanying communication, from the *Cirencester and Swindon Express*, although written for the edification of our friends on the other side of the "big pond," may, perhaps, contain some hints of importance to their neighbors on this side. The relation which the veterinary art bears to a successful system of agriculture is too important to be overlooked by the American people,—a nation of agriculturists, and I sincerely hope that the subject may receive that attention which its importance demands.

Respectfully yours,
GEO. H. DADD, V. S.

THE PRESENT CONDITION OF VETERINARY MEDICINE,

IN ITS RELATION TO AGRICULTURE.

There is a short sentence in the English tongue of talismanic character in the minds of many of the present day—"Practical experience." What is it? The words are simple, but widely significant; extensive in their application, but too commonly confined to those who least of all deserve them. With the public they are the "*sine qua non*," the acme of attainable greatness. Truly, as our facetious contemporary, *Punch*, remarks, "truly we are a practical people. Our naval architects launch a frigate; she floats too much by the head, so we cut down her stern. Then she floats too much by the stern, so we take off her figure-head. Then she is found to be over-masted, and we put in lighter masts. Then it is found she can't carry canvass enough, and we take them out again. Then she rolls too much, and we increase her ballast. Then her lower deck ports are under water, and we plug them up. Without her lower tier she does not carry metal enough, so we clap two sixty-fours at her bow and two sixty-fours at her stern. Then she will not make any way at all, and we are forced to begin all over again; and the account concludes with an awful bill to pay." We should be sorry to underrate the importance of "practical experience," even to admit a question of its imperative necessity; but does it never occur to its most enthusiastic supporters, that a man may spend his threescore years and ten, practising all the time in the wrong direction? Science is an accumulation of facts and principles deduced from them, the products of numberless experiences. Is it not then obvious that the man who commences to practice without making himself first familiar with the practice of those who have gone before him, is attempting, single-handed, what thousands combined have hardly accomplished? Of what value are a few isolated facts, unless they illustrate or indicate a principle? Every fact is but an example of some operating law; to be contented with the fact alone, to trust solely to "practical experience," is the characteristic of the empiric, the quack—not of the man of sense.

Was it by trusting to "practical experience" that Galileo discovered the motions of the planetary system? Ages of practice had not enlightened his predecessors. Was it by adherence to a mere physical fact that Newton recognized the force of attraction? The phenomenon which roused his giant mind was familiar to every schoolboy. Was it by trusting to "practical experience" that our glorious countryman Harvey, discovered the cir-

culation of the blood? His progenitors had practised for centuries, and still remained in ignorance. In all these cases the reasoning faculties of the educated man were called into energetic action; the facts were observed and noted, and further, their causes were sought out, the laws which governed them were analyzed, until unlooked-for and startling consequences became apparent. From the circumstance of a falling apple was deduced the force that regulates the universe:—such is science! that science which people mock and oppose. Then talk kindly of uniting with "practice!"—"science with practice!"—as though some new combination must be effected—as though science should be honored by the union, instead of looking on practice without science as a monster that dared not show its front in civilized society.

If under any conditions it is necessary to possess knowledge—correct and systematic knowledge—surely it must be where the complicated organism of the animal body requires regulation; if ever practice based on imitation become positively criminal, it must be where its rude hand is applied to repair a machine of whose construction it is profoundly ignorant, or of whose functions it retains no conception. With the most learned, success in the treatment of disease is not too frequent; how must it be with the ignorant? The untiring in the pursuit of knowledge are fain to confess that much is still beyond their ken; the man who combines all the requisites of his art observes with pain, that his remedies too often fail; what shall we say of him who, armed with his musty prescriptions, the property of his father's father, strong in an experience of twenty years spent in the pursuit of error, rashly offers his assistance? How true it is, that "fools will rush where angels fear to tread!" But we are told, the man is frequently successful; of course he is; animals will live sometimes in spite of all we can do to prevent them. We know instances where exposure on a frosty night has cured a dying horse of inflammation of his lungs; but a cold night is not therefore hailed by practitioners as a sovereign remedy. A case is recorded where an unsuccessful blow from the knacker's pole-axe restored an animal suffering from the last stage of lock-jaw; but concussion to the region of the brain is not at present much in favor as a curative agent for that disease. Because a case recovers under a certain plan of treatment, it by no means follows that the remedy is discovered; it is only by the aggregate of results that any reasonable conclusion can be arrived at.

What a significant tale is told by the records of animal mortality. Examine the slaughterman's receptacles in the neighborhood of populous cities; find that in one yard alone an average of three hundred horses per week, for months in the year, is not considered remarkable; pursue the inquiry, and learn the vicious system of management that leads to this; observe how much science is mixed up with it; note how far the science of ventilation is carried out; see how the food is proportioned to the digestive functions; question the amount of knowledge of the influence of noxious gases on the respiratory organs; and then answer why has "practical experience" tolerated all these evils, till they threatened universal destruction?

The preservation of health must, in the mind of the true follower of his art, stand infinitely higher than the cure of disease; it may be adverse to his

interest, to the interest of the profession to which he belongs, but the argument is childish, if nothing worse, that protests against the advantage of the many being consulted at the expense of the few. If the ultimate object of medicine be to support those who practice it, it becomes the duty of every one of its professors to help the people in ignorance; the man who expounds the functions of digestion to the masses becomes a dangerous member; the individual who insists on ventilation, a traitor to his cause. The total eradication of disease is synonymous with the annihilation of medicine; nevertheless he is no true disciple who does not aim at such an end. We are glad to quote from an opening lecture delivered by Professor Spooner in 1849. Speaking of the contract system, he remarks, "The further this system is carried, the more it will lead to a very broad development in both the veterinary and medical professions—public health, as maintained by the adoption of prophylactic measures, is that to which I allude; and the preservation of health ought, I think, be considered by us as a nobler art than the cure of disease. The rapid strides which agriculture is making, in the draining of lands, the knowledge of crops, &c., all lead to this consideration. The flocks and herds that adorn our landscapes, are as much crops as far as their growth is concerned, as are the ears of wheat or blades of grass that flutter in the breeze. An extension of the same science that fattens the corn will fatten the cattle. The vegetable kingdom, also, has its diseases and its cures, equally with the animal; but it is art and science on a large scale alone that can, by combating with the one, furnish the other. I look upon the veterinarian as the inseparable companion of the farmer, in the grand matter of the preservation of the health of his live stock; and the contract system must ultimately, I think, lead to his being paid rather according to the health, than according to the disease of the animals placed under his care." It is to the scientific investigator, not to the cowlach or the farrier, that the agriculturist must look for the attainment of so grand an object. We trust the prediction of Professor Spooner will, ere long, be fulfilled.

Up to the present we have dealt with generalities, which, though useful, are not sufficient. If they are not easily opposed, they may be to some not convincing; our subject requires us to enter into details—to expose, by reference to constantly recurring instances, the mal-practices of those who professing to alleviate animal sufferings, do frequently but contribute to its increase.

For the New England Farmer.

A COW POISONED BY DOGWOOD.

Mr. Brown:—In June, 1851, one of my cows went from the pasture among the bushes that line the road from my place to Still River. The following day, her eyes began to swell; the third day her whole forehead was covered with ulcers and scurf. She did not seem to suffer much; still, not knowing what to make of it, I consulted a man who had the reputation of being a skilful veterinarian. Although he confessed that he had never seen anything similar, yet he concurred with me in the opinion, that the cow was poisoned. The day after, I found an abundance of dogwood in the place where the cow was found. The

swelling yielded to soft washings and laxative medicines. Farmers should make it a point to destroy the dogwood which grows so luxuriantly and abundantly in wet meadows. Would it not be well in schools to make the children acquainted with it? There are but *very few* that know it, and I could give proofs from my own experience, how dangerous it is, not to know such an enemy.

Lancaster.

CHARLES SICKDROF.

GROWING TREES FROM CUTTINGS.

There are a great many things left yet, we are confident, that our philosophy has never dreamt of. Last spring we tried the Bohemian method of inserting cuttings in potatoes—but the vital fluid never ascended into the cuttings, and instead of a crop of trees, we shall get a crop of potatoes. We intend to try the suggestions given below; the experiment will be a cheap and simple one, and in relation to every similar experiment we would say to the reader "go, thou, and do likewise."

A French gentleman, named Delacroix, has discovered a new mode of propagating trees from cuttings, which has proved successful for apples, pears, plums, apricots, &c., as well as for roses and other plants that are tenacious of life. This method is to bend the cutting in the form of a bow and to put it in the ground at the two extremities, leaving only the middle part exposed and on a level with the surface of the ground. There must at that point be a good bud or shoot. All other parts being protected by the earth from drying, give vigor to the bud, which is soon transformed into leaves, by which in its turn it draws from the atmosphere the carbon necessary to the formation of the roots. The method of planting is to form two ridges, and placing the cuttings across the furrow between, cover the ends with earth, press it upon them, and water freely. The cuttings should be of last year's growth.

TOMATOES.

Those who wish to hurry their tomatoes for market, may do so by proper shortening-in at this time. All must have observed that 90 per cent. of the tomatoes grow within 18 inches of the ground, and that ninety per cent. of the vine, containing only ten per cent. of the fruit, grows above this point; therefore cut it off and remove it with the small tomatoes. The vines will not bleed, and the large tomatoes left will increase in size more than equal the value of those removed, besides getting them in market while the price is sufficiently high to compensate for their culture.—*Working Farmer.*

REMARKS.—Try this and ascertain whether Professor Mapes is right.

WARTS ON PLUM TREES.—In the warts on the plum twigs left with us by a gentleman a few days since, we see nothing differing from their usual appearance. Lying by us for a week, they are now hard and black. The softness and green color which they presented we have often noticed on young trees standing on rich ground and having a luxuriant growth.

SUMMER ROSE APPLE.

Above we give a portrait of the Summer Rose apple. Mr. Downing says it is a very pretty and very excellent apple, highly esteemed as a dessert fruit. It has not come into general cultivation yet, but is gaining friends.

The fruit is small; roundish; pale yellow, striped and marbled with red; tender, sprightly, pleasant flavor. Later than Early Harvest; smaller and less productive. Adapted to the private garden, for which it is fine. Ripens early in August.

For the New England Farmer.

TWENTY PIGS AT A LITTER.

MORE TRUTH THAN POETRY.

MR. BROWN:—In penning you this note, it is not my object to test your credulity, or stagger your belief in the marvellous, but simply to give publicity to a fact worthy of communication.

In these days of clap-traps and humbugs, when "spiritual knockings" and "fire annihilators" attract more attention, or rather seem of more importance than the science father Adam taught us, it seems best for an editor, as well as his readers, to masticate well their food for belief, before allowing it to pass into their minds for digestion. The following fact, however, comes too well authenticated, to need the oath of your obedient servant. Mr. Edwin Abbott, of Westbrook, in this county, has a sow, (of native breed,) which gave birth to *twenty pigs at one litter* on the 23d day of June! Comment is unnecessary. If you have any "Suffolks" in Massachusetts that will rival this Yankee specimen, on *breeding*, let us know it, and we won't tell any more hog stories.

HONESTUS.

Mechanic Falls, Me., June, 1852.

For the New England Farmer.

PRACTICAL SUGGESTIONS.

It is a fact, the importance of which is not sufficiently estimated, that the circumstances in which we have hitherto been placed have exerted upon our minds an influence either of a beneficial, or of an injurious tendency. As objects in outward nature produce impressions of an agreeable or disagreeable kind upon the senses, so the particular events which have occurred in our individual history, and the scenes with which we have been more especially conversant, have operated strongly in the formation of the character which we now respectively sustain. To man, in every station of life, the world has been a school in which his faculties have been trained and educated. The varied aspects which, in our limited sphere, it has presented, the manifold and singular vicissitudes, of which to us it has been the theatre, have all contributed to give a color and direction to our feelings and desires, and to help on, or retard, the improvement of our condition. Meanwhile time has never for a moment been stationary upon us.

Perhaps no class of individuals, whose pursuit is labor, have so much leisure during the whole year as the farmer. Except at a few seasons of the year his labor is so diversified, that at the close of the day he is prepared to pursue mental culture with a good degree of vigor. As a general thing, how many hours of leisure has the farmer which may well be appropriated to the acquisition of some useful information. Waste of time! If for every idle hour a man had to pay a small sum of money, how few idlers would be found loitering over the grounds! Yet time is money, and of much more consequence generally speaking than money. There is no part of the year in which the husbandman may not be usefully employed in improving his land. How much can be done in win-

ter, in clearing ground, taking manure from the barn and other places, and sledding it over meadow lands which cannot be passed when the ground is not frozen.

A year's supply of fuel should be procured, and fitted for use and housed by the first or middle of March. Let some time be appropriated in collecting broken and decayed wood and underbrush from the forest before the snow covers the ground in the autumn, and early in the winter, and when the ground is covered with snow, let this wood be hauled and fitted for the fire, and well housed, for wood is much better seasoned, without being exposed to the weather.

In like manner can preparations be made for building stone wall. Let the stones be dug and laid in heaps at a convenient distance before the frost enters the ground, and when the snow covers the earth let them be taken to the place where you wish to build your wall without any injury to the land.

Portable fence is of great convenience on a farm. This can be made at any leisure season, and be kept under cover till wanted for use. How convenient to have a few acres enclosed for a short period only, where a permanent fence would be a great inconvenience. Pasture grounds are much better divided in small enclosures, than to give the cattle too much range, where they are apt to waste the feed early in the season, and as the drought of summer comes on, the early grown grass is trampled down, and therefore much feed is wasted from not having the ground early fed. Better let a portion of pasture land be early mowed, then the second growth of grass will be readily eaten by the cattle.

These desultory remarks, Messrs. Editors, have been thrown together without any particular reference to time or season, and may be useful to some young agriculturist, not as being particularly new, for we most of us need to be reminded of our duty, or of what we already know. H. E.

ANDOVER HORTICULTURAL SOCIETY.—We learn that some of the enterprising citizens in the old and beautiful town of Andover, Mass., have had a meeting preliminary to the formation of a horticultural society in that town. Interesting addresses were made by Mr. S. S. YOUNG, Mr. JOHN AIKEN, and others. The following gentlemen were appointed a committee to report a constitution and by-laws for the government of the society, and call another meeting:

S. S. YOUNG,	DAVID MIDDLETON,
E. SANBORN,	GEORGE FOSTER,
Geo. CRUICKSHANKS,	CLARK,
— DENNET,	N. MORTON.
Rev. Mr. LORING,	

EXTRACT.—“In looking over the *Farmer* of last week, I see you take notice of the cold summer of 1816. This brings to my mind what an old lady in North Andover told me a week ago. ‘On the 16th of June, 1816,’ she said, ‘one of her daughters went out to drop potatoes, and it was so cold she had to wear a cloak, hood and mittens.’

Yours,

SUBSCRIBER.”

REPORT FROM THE WORCESTER COUNTY SOCIETY, ON FEEDING STOCK.

[CONCLUDED.]

It is understood that a man with a fair hand cutting machine can easily cut during any of the short days of winter a ton of hay, and not have a hard day's work at that.

Those who have large stocks of cattle will find it profitable to make use of some animal power, (horse or ox,) to aid in cutting their food for them. The same power may be used in cutting vegetables, sawing wood, &c. The quantity of food required for the support of cattle, as established by these experiments, although no greater than is stated in some agricultural publications, is believed to be considerably larger than has been usually estimated by the farmers in this vicinity. The steers of Mr. Dodge requiring but little for additional growth, beyond their support in good condition, consumed in hay, or its equivalent, daily, not less than 2 per cent. of their live weight. The dry cows of Mr. Demond, for their own support and for the support of the calves with which they were pregnant, demanded for their food an amount of hay, or its equivalent, equal to 2 1-3 per cent. of their live weight, and this proportion would be constantly increasing until they dropped their calves. The cows of Mr. Lincoln required a sufficiency of food for their own support, the supply of milk they were giving, and the sustenance and growth of the calves within them, of which they would be delivered at different periods. The one consumed of food, or its equivalent in hay, 2 4-10 per cent., and the other 2 4-5 per cent. of their live weight. Of the oxen referred to in the trial by Mr. Hawes, they required more food in consequence of their being employed in labor instead of being at rest, and more in consequence of being exposed to the inclemency of the weather for a part of the day instead of being in the barn protected from the cold. The consumption of food by them was 2 4-10 per cent. of their live weight.—These facts are important for the information of every farmer, that he may be enabled to calculate with more precision whether he has sufficient sustenance for his stock through the winter, making a liberal allowance for a late spring. No man can afford to stint his stock in their food. Should he, at any time, have reason to fear that his supply of hay, straw, &c., may be insufficient to carry his stock well through the season, it will be far better for him to sell a part at a reduced price; or even to give them away, than to allow them to become poor. An ox or a cow, poor in the spring, will require nearly the whole of the summer months in good feed to recover its condition, and its use be of little benefit to the owner. With young cattle, to be stinted in their growth through poverty is an irreparable injury.

Of the manner adopted by Mr. Dodge in the care of his steers, the committee cannot approve. After the first week they were confined wholly within the barn, without being allowed to go out for drink or for air and exercise. They were fed twice each day, and had water given to them but once each day. That cattle closely confined will take on fat more readily, is undoubtedly true, but in this instance the tendency to increase in flesh

was counteracted by their not being fed and watered so frequently as they should have been — Cattle should have food with much regularity at least three times a day, and during the long winter nights, particularly where the barn is so conveniently located with reference to the house as is that of Mr. Dodge, a fourth time (in the evening) would be preferred. Where the food for twelve hours is laid before the animal at one time, the quantity is so great that much of it is necessarily blown upon for a considerable time, and is not afterwards readily eaten. An animal deprived of drink twenty-four hours would become quite thirsty, and would, when allowed to drink, take into the stomach a large quantity of water, which would occasion suffering, both from the coldness, until it became warmed by the internal animal heat, and also by the distension of the stomach which it would occasion. It has been found that when cattle can drink at pleasure, they drink often, and in small quantities. It is desirable to conform to the natural habits of our animals, so far as is practicable. This mode of feeding, as applied to the steers, is not the manner Mr. Dodge would adopt for his whole stock, or which can be recommended to farmers to pursue. The statement of Mr. Dodge contains much valuable information, not only in relation to feeding, but also as to the amount of the solid manure voided by the cattle in proportion to the hay consumed, which it is important should be more generally known by farmers; and to this the liquid manure is to be added, in order to estimate the loss occasioned to a farm in selling off the hay and straw grown upon it.

The Committee, after having carefully considered the several statements of the different competitors, have awarded the first premium of \$30 to Wm. S. Lincoln; the second premium of \$20 to Amherst H. Hawes. As to the statement of Mr. Hawes, the Committee had at first some doubt whether it was proper for them to take it into consideration, he not having complied with all the requirements of the society, in having failed to give the average of the temperature in the barn as indicated by the thermometer. Upon further examination, they found that the two oxen stood side by side when in the barn, and when out, worked side by side in the yoke, and were therefore "constantly in the same temperature," and equally affected by the warmth or cold to which they were exposed, the average degree of which could only be given as to the barn. It would therefore be very imperfect as applied to this case. That the cold to which they were exposed, the average of which could not be given, had an important bearing upon the amount of food required for the support of the cattle, and the uses to which that food must be applied, the Committee did not doubt; and adjudged that they had been furnished in this case with all the information of which they could have availed themselves; that the omission could not have had any influence in their decision; and that they would therefore receive the statement as a substantial compliance with the conditions imposed for the trial, and consider it accordingly.

The Committee would fail in the discharge of their duty, did they omit to express their strong disapprobation of competitors assuming to decide whether the regulations of the society are judicious as applied to their case, and non-complying with such rules as they do not approve: that is a ques-

tion not submitted to them; they should strictly comply with all the requirements, and furnish the desired information to be used in such manner by the judges as in their discretion they may think proper.

The duty of the chairman was very easy, as the decision of the Committee was made without the necessity of an expression of an opinion from him. He would, however, add, that he fully concurs with them in the result to which they arrived.— He was charged by his associates with the duty of expressing to Messrs. Demond and Dodge their thanks and those of the society they represent, for the time and trouble they have devoted to the attainment of information which they believe to be highly valuable to the agricultural community, and from which they hope these gentlemen will derive benefits which will more than compensate them for the inconvenience these experiments have occasioned them.

In relation to the relative value that straw, turnips, carrots and Indian corn meal bear to good hay, the Committee have preferred to use the tables adopted by distinguished writers on agriculture, than to rely on their own opinions. They are, however, strongly impressed with the belief that in this case the value of carrots and corn meal, particularly the latter, is estimated too low, and this opinion receives confirmation from the result of the experiments of Hon. John Brooks. Had they adopted their own estimates of the value of these articles, the awards would have been the same.

All which is respectfully submitted,
By order of the Committee,
JOHN W. LINCOLN, *Chairman*.

STATEMENT OF CHARLES B. DEMOND.

To the Committee of the Worcester County Agricultural Society on Feeding:

GENTLEMEN:—Not being fully satisfied in my own mind as to the advantages or disadvantages of cutting hay as food for stock, I was encouraged by the society's premium to try an experiment. The following are the results. The trial was made with two cows, each 7 years old, of native breed and ordinary size; they were dried about the 10th of December, and kept during the month on coarse fodder, meadow hay, oat straw, &c. On the first day of January the experiment commenced. No. 1 calved the 4th day of March, 1851. No. 2 calved the 28th of February, 1851. Both cows are expected to come into the dairy on the 9th of March, 1852; they were fed on dry hay, with one-half peck of turnips per day.

No. 1.

Fed on cut hay,	{ Weight 870 lbs.
First 2 weeks,	{ Hay eaten 316 lbs.
	{ Gain in weight 24 lbs.

Long hay,	{ Weight 894 lbs.
Second 2 weeks,	{ Hay eaten 284 lbs.
	{ Gain in weight 12 lbs.

Cut hay,	{ Weight 906 lbs.
Third 2 weeks,	{ Hay eaten 295 lbs.
	{ Gain in weight 14 lbs.

Long hay,	{ Weight 920 lbs.
Fourth 2 weeks,	{ Hay eaten 279 lbs.
	{ Gain in weight 11 lbs.

Gain during the trial 61 lbs.

	No. 2.
Fed on long hay,	Weight 850 lbs.
First 2 weeks,	Hay eaten 298 lbs.
	Gain in weight 17 lbs.
Cut hay,	Weight 867 lbs.
Second 2 weeks,	Hay eaten 308 lbs.
	Gain in weight 17 lbs.
Long hay,	Weight 884 lbs.
Third 2 weeks,	Hay eaten 288 lbs.
	Gain 16 lbs.
Cut hay,	Weight 900 lbs.
Fourth 2 weeks,	Hay eaten 252 lbs.
	Gain in weight 9 lbs.
Gain during the trial 59 lbs.	

During the third week of trial, No. 1 was accidentally hooked by another animal in the abdomen, which I think must have caused her pain, and she did not do as well perhaps as she otherwise would have done. No. 2, during the last week of trial, did not appear to have so good an appetite as usual; the hay was a little finer, and when cut, she did not relish it as well. The hay used was a mixture of Timothy and Red Top, about equal.—The animals were kept in the barn all the time, (excepting being turned out to water twice a day,) at a temperature averaging 41 degrees. The turnips were fed to them in common with my other cattle in the morning. The cows are not fat, but in what would be called very decent order. The time of weighing was in the morning, and before they had drank. Changing the cows from poor to good hay will account perhaps for their consuming more hay, and gaining more in weight during the first period of trial than afterwards. The hay was weighed and the animals fed by myself, and I have endeavored to be as accurate as possible.

CHARLES B. DEMOND.

Grafton, March 2, 1852.

STATEMENT OF HARVEY DODGE.

To Hon. John W. Lincoln, Chairman of Com. on Feeding:

SIR:—The two animals on which I have been experimenting for eight weeks during the last winter, and on which your premium is claimed, are a pair of half-blood North Devon steers, two years old past, or three years coming, dark red color, well built, and very similar in all respects to each other. From 10 to 35 lbs. in weight is the greatest difference in the two, at any time, for four months past. No difference in keeping has been permitted, at any time, to grow one fatter than the other. They came from the pasture the first of winter in good condition, and were fed on good hay, corn fodder, and half a bushel of flat turnips per day, to the 4th of January. They were then put into a close stable by themselves, one tied eight feet from the other; boxes or close cribs were so fixed that it was impossible for them to waste their own, or get each other's food. Water was given them in the stable, and they were not permitted to go out of the stable except to be weighed once in two weeks, and one day for work, and this was during the first week of my experiment, and will show, conclusively to my mind, why they fell off in weight during the first two weeks. They had been unaccustomed to the yoke and confinement in the stable, and being very ambitious, worked beyond their strength and evidently did not recover themselves before the end of the first

two weeks. Their food was regularly given them at 8 o'clock in the morning, and 4 in the afternoon, and feeding was permitted after the first week only at these two stated times. After the first week, water was given but once a day, (at noon;) though repeatedly offered at other times, it was generally refused after the first week. A full bucket of water was weighed and the number minuted, and the fractions weighed back and minuted, and an average taken at the end of each two weeks; a thermometer was kept during the eight weeks, centre ways between where the steers were tied, in a box for the purpose fastened to the scaffold floor, and consulted at 8 and 4 o'clock, (feeding time,) the degrees minuted and an average taken at the end of each two weeks, being weighing day. The quality of hay was an average of what is cut on my farm,—about equal portions of herdsgrass and red top, with a small quantity of clover mixed. A half-bucket of water was sprinkled on to their hay, both cut and uncut, after being put into their crib, and the meal sifted on to the wet hay at each feeding, (morning and evening,) which feed was generally consumed before the next feeding time; if not all consumed, a less quantity was placed in the box for the next meal, though they experienced no want of more food at any time during the trial than what they received; in short, they had enough and no more. The high steer would have preferred long or uncut hay to cut, while the off steer seemed to prefer cut feed from the very commencement, and so continued through the different times he was on this feed; and this circumstance accounts conclusively to my mind why the off steer took on a greater share of weight during the times he was on cut feed; and the high steer made his greatest weight on long feed, (owing to his disrelish for cut feed, neither being accustomed to cut feed before this experiment,) though I have no doubt but what he would have become as fond of cut feed as the off one in a short time, as most all animals do prefer cut to uncut, after being accustomed to it. I give below a statement of the different experiments, which were made with great care, and recorded at the time.

Experiment No. 1, commenced Jan. 8, 1852.

Jan. 3. High steer weighed 1075 lbs., cut hay 194 lbs. and 2 qts. of corn meal per day, making 28 qts. for 14 days. Temperature average past two weeks 28 degrees above.

Off steer weighed 1080 lbs. Long hay consumed 222 lbs., and 2 qts. of corn meal per day. For the last two weeks average temperature 28 deg. above; water drank by the pair after returning from weighing, 60 lbs.; average for the two, 70 lbs. per day during the trial.

Experiment No. 2, commenced Jan. 17, 1852.

Jan. 17. High steer weighed 1065 lbs.; consumed 215 lbs. of hay uncut, 2 qts. of meal per day for the last two weeks; temp. 18 deg.

Off steer weighed 1050 lbs.; cut hay 215 lbs., meal 2 qts. per day; temp. 18 deg.; the two steers drank after weighing 93 lbs. water; average water for 14 days, 74 lbs. per day.

Experiment No. 3, commenced Jan. 31, 1852.

Jan. 31. High steer weighed 1090 lbs.; cut hay 253 lbs., 2 qts. meal per day; temperature 32 degrees for the last two weeks.

Off steer weighed 1070 lbs.; uncut hay 258 lbs. consumed and 2 qts. of meal per day; temp. 32 deg.; water drank after being weighed 63 lbs.; average water for the two weeks, 70 lbs. per day.

Experiment No. 4, commenced Feb. 14, 1852.

Feb. 14. Nigh steer weighed 1095 lbs.; uncut hay 254 lbs., 2 qts. meal per day, temp. 37 deg.; water drank after weighing 33 lbs.

Off steer weighed 1105 lbs.; consumed 254 lbs. cut hay, 2 qts. meal per day, temp. 37 deg. above, water drank after weighing 43 lbs.; average water drank by the two steers 79 lbs. per day for the last two weeks.

Feb. 28. Nigh steer weighed 1125 lbs., water drank after being weighed 32 lbs.

Off steer weighed 1160 lbs., drank 36 lbs. of water after being weighed.

It will be seen by reference as above that 949 lbs. of long hay was consumed, and 916 lbs. of cut, making a difference in favor of cut feed of 33 lbs. of hay. In experiment No. 1, the nigh steer on cut feed lost but 10 lbs., while the off steer on long feed lost 30 lbs. In experiment No. 2, nigh steer gained 25 lbs. on long, and off steer gained 20 lbs. on cut. In experiment No. 3, nigh steer gained 5 lbs. on cut, and off steer 35 on long. In experiment No. 4, nigh steer gained 30 lbs. on long, and off steer 55 on cut, showing the whole gain, after taking out the loss on experiment No. 1, to be 130 lbs.; 70 lbs. of this gain was made by cut, and 60 lbs. by long feed,—showing a difference in favor of cut feed over uncut of 33 lbs. of hay and 10 lbs. of live weight.

Sutton, March 15, 1852. HARVEY DODGE.

STATEMENT OF WILLIAM S. LINCOLN.

[Mr. W. S. LINCOLN presented a long and carefully prepared table, which being in rule and figure, we cannot make it convenient to copy.]

It is necessary, in order to comply with the rule adopted for the trial, to add a few particulars.—The trial was made with two cows. One, Beauty, calved on the 14th day of June last, and is expected to come in on the last day of June, having been served the 30th day of September last. She is 1-4 Ayrshire, was raised by myself, and will be 4 yrs. old the 13th day of May next. The other, Cherry, calved on the 20th of June last, and is expected to come in on the 14th day of May next, having been served on the 4th day of August last. She was purchased by me, is said to have some Devon blood in her, and is also 4 years old this spring. At the commencement of the trial both animals appeared to be in good health, but before the first period of trial had passed, Cherry showed symptoms of disease. Her disease was the "Horn ail." I think a check was put to the disease and she began to mend before the third period had expired, though she had not entirely recovered till after the last fortnight of trial had commenced, or perhaps till its expiration. Her sickness was severe during the first part of its continuance. Probably her health was quite as good during the last fortnight, if indeed it was not better, than at any other period of the trial.

In conducting this experiment, my general management in the stable has not been varied in the least particular, save so far as the preparation of fodder by cutting was concerned. I have no doubt a greater gain may be obtained by forcing; but

my aim has been so to conduct this experiment that others might be satisfied what results would attend similar management with their own stock.

The table shows the amount of food, (hay and roots,) fed to each animal. Each of these cows has fared just like all the rest of my stock, save that their hay on alternate fortnights has been cut, and the amount of roots fed to them daily has been determined by scales instead of measure.

Perhaps I should add that the milking is at regular hours, at 6 A. M. and 6 P. M.; that each morning each animal is *curried* clean, turned out to drink, and allowed to return to the barn as soon as she pleases; that the barn is shut up till noon, then the same course of watering is pursued, the barn shut up again,—and so at night. At this time the cattle are kept out till they can be bedded down, when they are turned in, fed, milked, and the barn shut up for the night. The amount of food consumed is put before the cattle at *three* meals.

Inasmuch as I have taken the sole care of my stock, I can say with confidence that the weights of fodder and milk are correct. The certificates of the weights accompanying this are vouchers for the gain or loss in live weight of the animals at the respective times of weighing.

The committee will excuse an intrusion of my opinion upon the advantage of cutting hay before feeding to stock, and in what I say I have no reference to the experiment I have detailed. My milking stock consisted of one cow which came in the 29th of last October, the two trial cows, and one other which calved last April, and is expected to calve again the first of next April. Sometime before commencing this experiment, I was feeding to my stock what would be called poor stock hay, with an allowance of roots. I commenced cutting this hay for all my stock, young and old, (sixteen head,) occupying me 1 1-2 hours daily. Almost simultaneously with feeding the cut hay was an increase of milk, very perceptible as it was milked in the pail. An inquiry was made by my wife, who in person takes sole charge of the dairy, as to the cause of this increase. An evasive reply was made. From day to day the milk increased enough, from the stock I have described, to require the substitution of 6 qt. for 4 qt. pans, which had been previously used. I think I am within bounds in saying the increase was over a pint daily per cow, occasioned, to the best of my knowledge, solely by the use of cut hay. As to the general condition of my stock, the committee, should they desire to look at it, can judge.

Whether, in your judgment, this may be the most or the least successful of the experiments in determining this vexed question, is of little consequence. That it may be of such character as to induce to other more general and longer extended trials, is the hope of,

Yours respectfully, Wm. S. LINCOLN.
March 12, 1852.

I should have added that the hay used was English, what is called "old field;" that it was universally fed *dry*; that the times of feeding were regular throughout the entire period, being 6 A. M., 1 and 6 P. M.; and that the animals were weighed at each time early in the morning, say from 7 to half-past 8, and always before being allowed to drink.

W. S. L.

LETTER FROM HON. JOHN W. LINCOLN.

To the Committee to award the Premiums for experiments in feeding with cut and uncut hay :

GENTLEMEN:—You will doubtless recollect that at the meeting of the Trustees of the Worcester Agricultural Society at which it was agreed to offer premiums for the purpose of ascertaining by experiments the advantages or disadvantages of feeding farm stock with cut or uncut hay, I stated that personally I should not be a competitor; that I had an opinion which I had been unable to find evidence to confirm or disprove, and which I was desirous, as I deemed the subject of much importance to the farmer, to have tested by experiment; that I considered it desirable to excite as much competition for the premiums as was practicable; that to ensure an additional trial I was disposed to say to Mr. Hawes, who has for about 12 years had the immediate supervision of my farm, that he might make the experiment with any of my cattle, and should be entitled to the premium, if the committee should think that the result of the experiment made by him would justify such an award, provided the board should be of the opinion that there was no impropriety in my so doing: Mr. Hawes to be considered as standing in the same condition as those competitors who should make the experiment with their own cattle and food.—The Trustees expressed their approbation of this arrangement as being favorable to the Society, thereby increasing the competition. I accordingly made the proposition to Mr. Hawes, who assented to it with the express understanding that I should have no pecuniary interest in the question of premium, and should have nothing to do with the experiment, except to aid in drawing the report from such facts as he should furnish me, if he should desire it. Of my position the board were reminded at their meeting when I was placed on this committee.

Mr. Hawes made out a written statement of the weighing of the cattle at the different times, and of the hay, cut and uncut, which they had eaten during the different periods, addressed to me, stating to me verbally several circumstances which were not embodied in his report; believing that it was important that all the facts in the case should be made known to the committee, it became necessary that it should be rewritten, which has been done, and it is now communicated to you.

As my connection with Mr. Hawes, as it has been of many years' continuance, is generally known to the public, my position in relation to this experiment would not be understood, without an explanation which should define my position in reference to this business, except to those who, like yourselves, have been acquainted with all the facts in the case, which seemed to render this statement necessary, and it is now submitted to your disposal.

Respectfully, your most obed't servant,

JOHN W. LINCOLN.

STATEMENT OF MR. HAWES.

HON. JOHN W. LINCOLN:—Sir,—As requested by you, I have made a trial of feeding with cut and uncut hay, with your speckled yoke of oxen, in terms of one fortnight each. When one was fed with cut hay, the other had uncut hay, and so changing at the expiration of each two weeks, except at the close when the trial was prolonged. The trial was commenced on Monday, the 15th

day of December last, at which time the near ox weighed 1520 lbs., the off ox 1500 lbs., on the hay scales of Henry S. Washburn, Esq., in the Quinsigamond village. Each ox was fed with the same quantity of hay, of the same quality, 35 lbs. of uncut hay being eaten each day to the 29th December by the near ox, and 35 lbs. of cut hay by the off ox. On the 29th December the cattle were again weighed on the same scales, and the near ox was said to weigh 1504 lbs. and the off ox 1487 lbs.; by this it would appear that the near ox had lost in weight 16 lbs. on uncut hay and the off ox 13 lbs. on cut hay. Between the 15th and 29th of December, these cattle were worked 10 days in drawing heavy loads of green oak wood from the farm into the village, some of them exceeding 11 ft. in measure, principally to the houses of Hon. L. Lincoln and W. S. Lincoln, Esq., they being one yoke of a team of two pairs of cattle. It should be stated that I then believed that there must have been an error in the last weighing as above stated; I was of the opinion that the cattle had both gained in weight during the fortnight, instead of having lost any of their flesh; such was also the opinion of others, who saw them, and that opinion seems to be confirmed by subsequent results. The weight as given by the hay scales on the 29th December, was for the near ox 1504 lbs. for the off ox 1487, they each of them had 38 lbs. of hay per day, the near ox having cut hay, the off ox uncut hay. On the 12th of January last they were weighed on the hay scales of William B. Fox, Esq., the scales of H. S. Washburn, Esq., having been rendered useless by an accumulation of ice; the scales of W. B. Fox, Esq., were used during the remainder of the trial. The weight this day, as given by the scales, was for the near ox 1594 lbs., for the off ox 1556 lbs.; each ox during the preceding two weeks had eaten 38 lbs. of hay per day, and if there was no mistake in the last weighing on Mr. Washburn's scales, the near ox had gained 90 lbs. on cut hay, the off ox 69 lbs. on uncut hay—during this period the oxen had worked 10 days in drawing logs to mill, and wood into the central village.

From the 12th to the 26th January, the cattle were fed with 38 lbs. of hay each, except on the 16th, 17th and 18th days, on which they eat 40 lbs. each: on those days they performed no labor and were in the barn the greater part of the day. The weight of the near ox was 1616 lbs., of the off ox 1586 lbs., from which it appears that the near ox had gained 22 lbs. on uncut hay, and the off ox 30 lbs. on cut hay—during this time the cattle worked 10 days in drawing wood to railroad.

From the 26th of January to February 9, each of the oxen eat 39 lbs. hay per day, and at the last mentioned time the near ox weighed 1646 lbs., and the off ox 1604 lbs., from which it appears the near ox gained 30 lbs. on cut hay, and the off ox 18 lbs. on uncut hay—during this time the cattle worked 10 days in drawing logs to mill.

From the 9th to the 16th of February, the cattle were worked 6 days in drawing wood and rocks, and each eat 39 lbs. hay per day; on the last mentioned day the scales gave to each ox the same weight as on the same day a week before, the near ox having uncut hay, the off ox cut hay.

From February 16th to 23d, one week, the cattle each of them eat 39 lbs. hay each day, and were worked 6 days in drawing wood, rocks, &c.,

and on the 23d February the near ox weighed 1648 lbs. and the off ox 1602 lbs., by which it appears the near ox gained 2 lbs. on cut feed and the off ox lost 2 lbs. on uncut hay. From Feb. 23d to March 1st, one week, the cattle were worked 6 days in drawing rocks, wood and logs; at the expiration of the term the near ox weighed 1628 lbs. and the off ox 1617; the near ox having lost 20 lbs. on uncut hay, the off ox gaining 15 on cut hay. As time would not allow the continuance of the experiment, and allow time to make out a report, it was here closed. It will be seen that during the whole time the near ox has gained 108 lbs., the off ox 117 lbs., making 225 lbs.; the near ox has gained on cut feed 122 lbs., the off ox has gained on cut feed 45 lbs., and lost 13 lbs.; net gain 32 lbs., making 154 lbs. gain on cut feed—the near ox has gained on uncut hay 22 lbs. and lost 36 lbs., net loss 14 lbs.; the off ox has gained on uncut hay 87 lbs., and lost 2 lbs., net gain 85; gain on uncut hay, for the pair 71 lbs.; greater gain on cut hay than uncut, 83 lbs., provided there was no mistake in the second weight of the cattle. If no account is taken of the first four weeks the net gain in favor of cutting hay is 59 lbs.

A great advantage in cutting hay, at least for working stock, was very obvious during the whole of this experiment; before the ox feeding on uncut hay had gotten one-half through with his allowance, the ox which had cut feed, had eaten up what was given him and was lying down taking his rest, and this at noon, when but little time is allowed for eating and rest, must be an advantage of no small importance.

The labor of the cattle for the last six weeks, and particularly of the last week, was quite severe, the loads were usually heavy, and in consequence of considerable bare ground, the draught was in many cases very hard.

The state of the atmosphere it was not possible to take account of, as the cattle were employed at labor in the open air without anything to protect them from its severity, (probably suffering more when standing for the loads to be put on than when in exercise,) and would not immediately recover from the effects of their exposure, upon being returned to the barn. The barn where they were kept is warm; at no time during the winter has the manure where the cattle stood been in any manner stiffened by the action of the frost. The temperature in the barn must have been nearer 40 than 30 degrees; but little regard was paid to the warmth of the barn, the cattle being absent so large a portion of the time. It may be proper here to state that it has been deemed expedient to keep open through all the hours of the day, the upper half of a small door for the benefit of air and ventilation, in addition to some small windows. The average number of hours that the cattle have worked per day has been six, but during the latter part of the term their hours were occasionally extended to nine. During the whole trial the oxen had nothing given them to eat except hay as stated, and their only food from the 15th December to March 1st, both inclusive, was hay and water.

Had I exercised my own discretion in this matter, I should have selected two animals for the trial who would have had nothing to do but to eat and grow fat, as more likely to furnish a result which

would have appeared far better on paper, and then should have been able to have complied with all the requirements of the society. You will recollect that you suggested to me, to make the trial with the working oxen, saying that you wished the trials should be made under all the circumstances common to a farmer's stock; that it was perhaps more important as applied to working stock than any other; that you doubted whether any other person would make a trial with oxen actually at work at the time, and expressed a wish that I would do it. I yielded to your wishes, and at your request have made the trial; the particulars of which have been stated, to be disposed of in such a manner as the committee shall judge proper.

These cattle were bred in Vermont, were purchased for you when they were about 3 1-2 years old, and about these days are supposed to be coming six years old.

It should have previously been stated that the hay as given to the cattle was all of it in a dry state.

AMHERST H. HAWES.

LETTER FROM HON. JOHN BROOKS.

To the Committee of the Worcester County Agricultural Society on Feeding.

GENTLEMEN:—Herewith you have an account of some trials in feeding which I have made within the last three months, with a view to determine the relative value of different kinds of food for producing milk, and the proportion of solid manure to the hay consumed. I have purposely delayed this communication beyond the time named in the society's rules for having all applications for premium on feeding filed with the Secretary (the 15th of March,) because I do not propose for a premium, but wish only to add whatever I may to the interest of this important subject. You then, gentlemen, will not consider me as competing with gentlemen proposing for premium, but will dispose of this communication in any way you may deem proper.

December 17, 1851, commenced feeding two cows about 7 months after calving; the cows were gravid and expected to calve about the last of March next; live weight 1600 lbs.; one of them 44 the other 31 months old. Each trial continued 5 days. First 5 days fed on 2 per cent. of live weight, of cut hay daily, 32 lbs.
 2 lbs. Indian meal, hay value, 8
 Hay value of daily food, 40
 Hay value of five days' food, 200
 Cost of 5 days' food, hay at 1-2 c. per lb., \$1.00.
 Milk in five days, 61.875 lbs.
 Cost of milk, hay at 1-2 cent a lb., 1.616 cents the lb., or 3.232 cents the wine quart.

SECOND TRIAL—

Fed five days on 2 1-2 per cent. of live weight of cut hay daily, 40 lbs.
 Cut hay in five days, 200
 Cost of 5 days' food, hay at 1-2 c. per lb., \$1.00.
 Milk in five days, 60 lbs.
 Cost of milk, hay at 1-2 cent per lb., 1.666 cents the lb., or 3.332 cents the wine quart.

These trials show that 2 lbs. of Indian meal are very nearly equal to 1-2 per cent. of live weight of hay, or that one pound of meal is equal, nearly, to 4 lbs. of good English hay.

THIRD TRIAL.

Fed five days on cut hay,	16 lbs.
32 lbs. oat straw, hay value,	16
2 lbs. Indian meal, hay value,	8
Hay value of food daily,	40
Hay value of five days' food,	200
Cost of 5 days' food, hay at 1-2 c. per lb.,	\$1.00.
Deduct 5 lbs. hay and straw not consumed	2.5
Milk in five days' 50 lbs.,	\$0.97, 6.

Cost of milk, hay at 1-2 cent a pound 1.95 cents the lb., or 3.90 cents the wine quart. The hay and straw cut, and given wet; the meal sifted over the hay and straw. This trial seems to show that 2 lbs. of oat straw is not equal for milk to 1 lb. of hay.

FOURTH TRIAL.

Fed five days, on cut hay daily,	16 lbs.
Oat straw cut, 32 lbs. hay value,	16
2 lbs. Indian meal, hay value,	8
Hay value of five days' food,	200
Deduct six pounds not consumed,	6
	194

Cost of 5 days' food, hay at 1-2 c. per lb., \$0.97. Milk in five days, 48 6-16 lbs.

Cost of milk, hay at 1-2 cent per lb. 1.995 cents per lb., or 3.99 cents the wine quart. The hay, straw and meal were given dry, and the trial shows that dry hay, straw and meal is not so good for milk as when wet.

Feb. 3d, 1852, commenced feeding two cows, one 33 months old, 14 days after calving, live weight 1000 lbs. The other 31 months old, 14 days after calving, not now in calf, live weight 600 lbs. These cows were fed five days on 42 lbs., or 2 1-2 per cent. of their live weight of uncut hay and 50 lbs. of flat turnips daily.

Uncut hay daily,	42 lbs.
Turnips, 50 lbs., hay value,	10

	52
Hay value of five days' food	260

Cost of five days' food, hay at 1-2c. per lb. \$1.30. Milk in five days, 153.625 lbs.

Cost of milk, hay at 1-2 cent. the lb., .846 of a cent the lb., or 1.692 cents wine quart.

SECOND TRIAL.

Fed 5 days on cut hay.	
Cut hay daily,	42 lbs.
Turnips, 50 lbs., hay value,	10

	52
Hay value of five days' food,	260
Deduct five lbs. not consumed,	5

	255
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Cost of 5 days' food, hay at 1-2c per lb., \$1.27, 5. Milk in five days, 152.25 lbs.

Cost of milk, 837 of a cent per lb., or 1.674 cents the wine qt.

The cows did not eat the cut hay quite so well as the long hay on the first trial, so that on the whole the experiment shows a small difference in favor of cut hay.

THIRD TRIAL.

Fed same as second trial, except gave 3 lbs. Indian meal instead of 50 lbs. turnips.	
Cut hay daily,	42 lbs.
3 lbs. Indian meal daily, hay value,	12
	54

Hay value five days' food,	270
Deduct 10 lbs. hay not consumed,	10

260

Cost of 5 days' food, hay at 1-2 c. the lb., \$1.30. Milk in five days 153 lbs.

Cost of milk, hay at 1-2 cent per lb., 0.849 of a cent per lb., or 1.698 cents the wine quart. This trial seems to prove that 3 lbs. Indian meal is equal to 12 lbs. English hay or 50 lbs. of flat turnips for milk.

FOURTH TRIAL.

Fed cut hay daily,	42 lbs.
33 lbs. carrots daily, hay value,	11

	53
Hay value five days' food,	265
Deduct five lbs. hay not consumed,	5

	260
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Cost of 5 days' food, hay at 1-2 cent per lb., \$1.30. Milk in five days 150.5 lbs.

Cost of milk, hay at 1-2 cent per lb., .863 of a cent per lb., or 1.726 cent the wine quart. This trial shows that 33 lbs. of carrots are not quite equal for milk to 50 lbs. of flat turnips or 3 lbs. of Indian meal. The cows in all the trials had free access to water.

December 10, 1851, commenced feeding one cow 72 months old, one do. 96 months old, one do. 48 months old, 5 heifers 32 months old, 7 heifers 22 months old, 4 calves 9 months old, 4 calves 8 months old. These cattle weighed, live weight, 14,567 lbs., and were fed five days on 277 lbs. of cut hay daily, and drank daily 887 lbs. of water, dropped daily 668 lbs. solid manure, or 2.41 lbs. of manure for one lb. of hay consumed.

Second trial commenced Dec. 16, 1851. Fed same cattle five days on 352 lbs. hay daily, solid manure dropped daily 860 lbs., or 2.44 lbs. for one lb. of hay consumed; drank daily 868 lbs. water.

February 23, commenced feeding one cow 72 months old, one do. 96 months old and one 48 months old, 3 heifers 32 months old, and 6 heifers 22 months old. The live weight of these cattle was 9472 lbs.; these cattle were fed 5 days 240 lbs. cut hay daily; solid manure dropped daily 594 lbs., or 2.47 lbs. of manure for one lb. of hay consumed. Drank daily 542 lbs. water.

Hay consumed in the three trials, 860 lbs. Manure dropped in three trials, 2122 lbs.

The proportion of manure to hay is as 2.44 lbs. of manure to one lb. of hay; the manure weighed 50 lbs. the cubic foot.

Manure after remaining under my barn one year weighed 44 lbs. the cubic foot, a loss of 6 lbs. in one year, or 12 per cent of its weight when recently dropped.

JOHN BROOKS.

Princeton, March 22, 1852.

GRASS—*The Prospect*.—It is no longer a matter of doubt that we shall have a short crop of hay in this vicinity. The season is so far advanced that the best of weather will be insufficient to produce an average yield. Grass was winter-killed to some extent; and added to this we had a cold, dry and backward spring. Grass is light and thin almost everywhere. It is not too late to raise a good crop of corn-fodder, and no fodder is better for cows or cattle generally. An acre or two well cured would do a good deal towards carrying a

stock through the winter.—*Caledonian, St. Johnsbury, Vt.*

INFLUENCE OF THE ATMOSPHERE ON VEGETATION.

It is not sufficient that a plant is set in a soil most appropriate and suitable to its habits, nor that it receives the manures which have a tendency to fertilize and invigorate it;—but it will soon languish and decay if the atmosphere surrounding it have not the proper moisture and temperature; if it be not placed so as to receive the benefit of light, and if the needful stimulating and alimentary elements be not present in a gaseous form, and constantly supplied to the growing plant. The humidity and temperature of the air should bear a constant proportion, otherwise the plant receives injury. If, for instance, the moisture is greatly reduced, and the heat increased, a drought is produced, injurious and sometimes fatal to the plant. And on the other hand it may suffer equal injury if the moisture is superabundant and the temperature much diminished. A continuance of cold and wet checks and enfeebles the plant. If the atmosphere is surcharged with both heat and moisture, the condition most favorable to vegetation is presented.

All seeds germinate well without light. But though light is not necessary to germination, yet generally it is highly beneficial to vegetation, which is a different process from germination, and which requires different gases for its successful growth. Celery is bleached and made tender in being deprived of light; and it is, at the same time, diseased. Light gives the green color to vegetation. The mode, however, in which light operates on plants is not very well known. It is supposed also to have an effect on the odor of flowers and the taste of fruits. Some plants delight in the most vivid rays of summer noon, others flourish best in a moderate light and under the covert of the forest.

But the atmosphere itself, not regarding its conditions of moisture or temperature, nor the light which is transmitted through it, but the elements of which it is composed, is necessary to the vitality of plants, and is by its absorption the chief source of the vegetable vigor and health. When the air is too dry, evaporation goes on faster than moisture can be re-supplied by absorption. At the time of rains and storms, when the atmosphere is both warm and moist, and especially when well charged with electricity, vegetation is most rapid and at the same time most vigorous.

NEST OF THE TAILOR-BIRD.—The tailor-bird of Hindostan gathers cotton from the shrubs, spins it to a thread by means of its feet and long bill, and then employing its bill as an awl, it sews the large leaves of an Indian tree together so as to protect and conceal its young. Cotton, as an article of manufacture, is quite of modern introduction to

Europe; yet long before the capabilities of this invaluable plant had been discovered by us, the instinct of that little bird had guided it to its use, and the cotton thread was annually employed in the completion of its nest.—*Kidd's Own Journal.*

THE SEASON IN NEW HAMPSHIRE.

The season up to the time of this present writing has been a remarkable one. The warm and growing days have been few. The opening of spring was unusually retarded and it was very late before the seed could be got into the earth. Much of it had not vegetated before the ground became parched for want of rain. This drought was accompanied by cold and severe winds from the west and northwest. Many of the smaller garden seeds have not yet germinated. We have strong hope, however, from the recent showers and rains. The grass in many sections had shown signs of suffering and gave prospect of a light crop. A few days has produced considerable change and the prospect has improved. Each shower has cleared away cold, and with it high winds. As we write, the leaves on the trees that overhang and shade our window look as though a frost had bitten them. Frost was observed in gardens in this vicinity on the morning of the fifth, and once in the week since. Grains are looking well; corn is mostly up, looking pretty well except a little yellow. Potatoes, peas, beans, &c., look uncommonly well. Fruit, so far as we have seen, looks uncommonly well. Warm weather for the remainder of the month, and a warm July, will bring about, we think, a good, general crop.—*Granite Farmer, June 22d.*

ROTATION OF OUR FOREST TREES.

We desire here to allude to a subject which has an important indirect bearing, at least on the subject of agriculture, because it illustrates the great rotation principle, in the vegetable kingdom.

The forests in many parts of our country are about changing their tenants. In our vicinity, the great burden of our forest timber, as found here by the first settlers, was white oak. This is about giving place to the black oak, especially on elevated ridges, or where the land is inclined to be sandy. The venerable white oaks, with diameters from 30 to 50 inches, are, in most instances, surrounded by a crop of sapling black oaks, leaving beneath their shade nothing to perpetuate their kind.

If we are not mistaken in our judgment, the cause of this is not very hard to define. It is a matter well understood, by those who have given any attention to the subject, that there is, in every portion of the earth, certain elements or principles, which go into the composition of vegetable matter. That any particular species of vegetable will sooner or later consume out of the earth that which is peculiar to its nature, after which that particular kind will not prosper until the principle which nourishes it is reproduced, either by resting the land, or by special manuring.

Some vegetables exhaust from the soil their peculiar food more rapidly than others. Flax, for instance. It used to be said by old farmers, that a piece of ground that had borne a crop of flax would not bear another for seven years.

It is on this principle that the rotation in crops is predicated; a doctrine, for the knowledge of

which we are indebted to our experimental farmers, and to book reading. This principle, of the rotation in crops, is probably as well understood, at this time, as anything connected with the science of agriculture. And this is the principle, no doubt, which explains why it is that the white-oak is leaving our forests and giving place to the black oak timber. It has been so long the undisputed tenant of our woods, that, having exhausted from the soil that aliment upon which it lives, it retires. In the order of Providence, to give place to a successor whose special food yet remains in rich abundance in the earth.

Every farmer who has attentively observed the progress of vegetation in his own lane and yard, must have noticed the operation of this principle. The order of our grounds is something like this—the first occupant was the smart weed—the next a species of white blossomed weed—then the dog fennel, and now the yarrow is coming. As soon as the aliment was extracted that nourished each particular kind, it died for the want of something to live on, and was succeeded by another species, and perhaps mere accident determined the successor.

Since our attention has been directed to this transition in the forest, we have made the subject a matter of inquiry, when favored with the company of men who would be likely to notice things of this kind.

Having been referred, with reference to this matter, to Joshua Coperthwaite, of Medford, New Jersey, where they have timber lands which have frequently been cut off for the supply of wood to the Philadelphia market, we wrote to that gentleman upon the subject, and have received his answer, from which we take the following extract:—"If the pine is cut off the oak will grow, and if the oak is cut off the pine will grow."

At the late State Fair, at Cincinnati, we met with an intelligent fruit grower from Illinois, to whom we mentioned this forest subject, and found that he had noticed this change going on among the trees of the wood. At our request he penciled down and handed us the following statement. He was formerly a resident of Ohio, and his remarks refer to this State:—

"I have long been convinced that two generations of the same kind of forest trees seldom or never succeed each other on the same tract of land. A crop of trees, nearly all of one kind, which last from two to four and sometimes to five centuries, seem to exhaust the soil of that peculiar nutriment which is adapted to that sort, and at the same time prepares it for some other.

"Instances: there is the track of an old tornado, which passed through Delaware county, the north-east corner of Licking, and finally into the south-east part of Knox, which, upon counting the annuals on a number of stumps, I ascertained to have occurred about the year 1740. In the track of this tornado, the timber is essentially different from the older timber on each side of it. Again; most of the west part of Knox county was, thirty years ago, when I first became acquainted with it, covered with a growth of beech, slightly mixed with other timber. That this growth had succeeded an oak forest was quite plain, from the fact, that oak trees of enormous size, in a state of decay, were to be found in every direction."

The foregoing extract is taken from the Agricultural

Report of the State of Ohio, a large volume, for which we are indebted to our respected correspondent, C. Springer, of O., who directed our attention to this subject, which is contained in a letter to E. Harkness, of Muskingum Co.

We have noticed, and we have heard many farmers remark, that white oak and maple came up after pines were cut down. We have seen this in the pine forests in the counties of Albany and Oneida in this State, but we have never examined the subject so attentively as to perceive the existence of a certain law in these changes. The subject, we believe, demands further investigation, for it is one of great interest to every class of our citizens.—*Scientific American*.

For the New England Farmer.

THE GARDEN.

BY E. PORTER DYER.

A garden, a garden, O give me a garden,
With soil of a mellow dark mould,
Where my face may get tanned, and my fingers may harden;
I would not exchange it for gold.

This spading, and hoeing, and raking, and wheeling,
Preparing to scatter the seed in,
To my mind the goodness of Him is revealing
Who planted a garden in Eden.

The scent of fresh mould—'tis refreshing to smell of—
The toil it requires is reviving;
The sweat of the brow, though 'tis nothing to tell of,
It sweetens the gardener's living.

Our first father found it an exquisite pleasure,
To practise the science of pruning,
Or walk with his Eve in the shade at his leisure,
For instance while "taking his nooning."

And whether he planted corn, beans, or tomatoes,
I find not a word or tradition,
But always supposed when he dug his potatoes,
He found them in healthy condition.

His strawberry plants must have looked quite delicious,
At least, while in process of bearing—
As berries and cream were regarded nutritious,
Of cream, his dear Eve was not sparing.

She always took pleasure in setting her table
To study the taste of her Adam;
And he from his garden where'er he was able
Found comfort in picking for madam.

And often I've thought had not garden employment
Been furnished in Eden for Adam,
His wife had been homesick, and all his enjoyment
Been making herb-tea for his madam.

STRAW AS A COVERING.

Clean straw is an excellent covering for many things; thousands on thousands of sea kale in frames or under hoops have no other blanching material; and how clean they grow in it! Rhubarb, in winter forcing and early spring, grows beautifully pinky. It is well known that early spring frosts destroy rhubarb; but if a six inch layer of straw is put on every crown, as the heads put up, they raise the straw with them, and it not only gives the stalks a better color, and makes them less "stringy," but it keeps the leaves from growing too large. No wind will blow it off, nor will the most intense frost injure the plants. Straw should not be looked on as a mere litter; it is as good as a frame upon a large scale. What sort of eatable strawberries would we have without

straw! In summer, every crop, such as gooseberries, currants, and many other things, should have the protection of straw, which keeps the sun from drying up the surface, and the surface roots damp and cool, while all weeds are kept down. Market gardeners use it for their frames—it matters not whether for cucumbers, melons, or potatoes, straw is their covering—and their crops are more secure than when protected by a thin mat. But some may object to the use of straw, on account of the litter it makes in a garden; but if any of those who object to its use for this reason, will just take a peep into Covent Garden market at any season, they cannot fail to be struck with the quality of the produce, in the raising of which straw plays an important part. Straw is also the best of all manures for a strong retentive soil, when it is dug in fresh, as it decays and leaves innumerable worm-like holes, which act as drains for the roots.—*Gardener's Chronicle*.

EFFECTS OF THE LATE SEVERE WINTER UPON VEGETATION.

Reports from various parts of the country establish the fact that the severe cold of the late winter has proved destructive to many fruit trees and plants. When we say *the severe cold*, we do not mean to declare that it was the *intensity* of the cold in itself that has proved so fatal, for that we do not pretend to know. The question still remains an open one, and demands the careful investigation of those best able to settle it.

Is it the *intensity* of cold that has killed the trees and plants?

It is said that the tree becomes frozen so hard that the sap vessels are burst, and that causes its death. There are not many winters in New England so mild but that the trees are all frozen so solid that logs from them may be split almost by a single blow of an axe from an athletic arm. But this does not seem to have been a sufficient condensation of cold to injure trees, or we should have lost them all. If they could not withstand this degree of freezing, they would soon become extinct. They not only withstand the lowest temperature that occurs in this latitude, say from sixteen to twenty degrees below zero, as the lowest point, but in the neighborhood of the arctic regions they live and grow to an enormous size.

Sir John Franklin (whose sad fate is universally lamented) in his overland expedition to those regions, between the years 1823 and 1827, wintered where the strongest brandy froze solid in a few minutes upon exposure, and the ink with which he was writing frequently froze upon his pen, although using it immediately before a huge fire of logs:—and yet in a climate giving this intense, long-protracted and appalling cold, he gives an account of trees growing there whose circumference is larger than any we have ever heard of elsewhere. These trees, according to his statement, attain a height of from 150 to upwards of 250 feet, varying

from *twenty* to nearly *sixty* feet in circumference; thus far exceeding

"The tallest pine
Hewn on Norwegian hills to be the mast
Of some great armorial."

So it would seem that trees are not only able to bear this extreme condensation of cold, but to bear it through a long-protracted season of intense and unmitigated severity—coming out and growing freely through a great many years, and reaching a magnitude unparalleled in warmer climates.

That these trees were indigenous and suited to the climate, would not seem to argue anything in favor of such hardihood and immense growth, any more than that our trees and plants, being indigenous, should possess the same power to resist the effects of cold. Beside, in nearly all our winters, the degree of cold for a short period is as great as it was at any time during the last one. Winter before the last the mercury fell as low in this region (being about eighteen degrees below zero,) as it did last winter, but without any injurious effect upon the trees and plants.

We are, therefore, led to believe that it is not the *intensity* of the cold that has caused the destruction daily witnessed among the trees and plants.

To what, then, may be imputed such wide-spread injury to the trees?

Can it be excessive evaporation in early spring? Many trees are now dead whose branches were full of sap and plump on the first of April, showing no indications whatever of the speedy death which awaited them, with the exception that blossom buds were found to have lost their vitality. Griffiths, in his *Chemistry of the Seasons*, says that plants are frequently "blighted" during early spring by dry winds, for when branches and leaves are first put forth, they are extremely succulent, and part with water so readily that during a dry easterly wind this loss by evaporation cannot be rapidly compensated for, by the capillary attraction of the roots. If such were the cause of the injury it should prove so annually, for fierce winds prevail throughout New England, for more than half the time during the entire spring months. If not to excessive evaporation, may the injury be attributed to the great and sudden changes which occur both in the autumn and spring?

Of late years the autumn weather has been mild and moist, and favorable to the growth of plants until a late period. The wood made during this time did not get perfected, and the result has been that this growth is found dead in the spring on the quince, peach, apple and plum trees.

Does this late growth affect the general condition and health of other portions of the tree, or is there any probability that it has in any way been accessory to its death?

Changes of temperature in the spring, are some-

times very great within a period of a few hours. Plants come forward in moist warm weather so that they show expanded leaves, buds are swollen and ready to burst, and the branches full of the ascending sap, when the sudden fall of temperature takes place. Leaves that had come out turn black and die, and the tender and half-hardy shrubs perish with them. These are phenomena of annual occurrence and familiar to most observers. But these changes, occurring after vegetation had fairly started in the spring, have not been supposed to prove destructive to trees of three or four, or even ten years' growth. That process seems to be one enveloped in mystery, and demands the attention of close observers and students of nature, to solve its workings.

There are those among us who have given a life of attention to these subjects, and now that they are prominently before the persons interested in them, it is hoped they will make their theories and observations known.

We have barely touched upon these topics, more with a view of eliciting facts from those of vastly greater experience, than to express any decided opinions of our own. We hope our correspondents who have carefully observed these phenomena, will favor us with the conclusions at which they have arrived.

For the New England Farmer.

AGRICULTURAL SCHOOLS.

MR. EDITOR:—With your permission, I would like the privilege through the *Farmer* to express my thanks to your Winchester correspondent, "Echo." Not so much for his favorable notice of my article which appeared in the *Farmer* not long since, as for the sound and sensible views which were expressed in his own upon the same subject. And also to express my satisfaction for his appropriate and practical remarks, as to the propriety of making it a rule with agricultural papers, so far as their columns will admit, of publishing other articles than those which may agree with the opinions of their editors. Such a policy I think would produce a very beneficial effect. An exchange of opinion is just what is wanted, in order to obtain a clear view of facts, and the true merits of the case. I believe in the saying of that great man, Thomas Jefferson, "that there is little to fear from error, so long as truth is left to combat it." I therefore most heartily endorse the sentiment of our friend "Echo," upon this part of his subject, and hope the present editor of the *Farmer* will continue his present liberal policy towards those of his correspondents who may happen to differ from him, and not do as one of his "illustrious predecessors" did;—bring mourning, lamentation and woe into one of the best of families, by casting one of his offsprings upon the funeral pyre to be consumed by that fearful element, merely because he was not pleased with its beauty, or if suffered to live, its growth might become dangerous to the community. I take it, however, that brother "Echo" is not the man to give way to grief, even when overtaken by such calamities as that described. I was not aware before reading his able article in

the *Farmer*, that the experiment of an agricultural college or school had been tested in this country to that extent and under so favorable circumstances, as he informs us it has. I am not disappointed, however, in their results. It is no more in my opinion than others are destined to meet with, that have the folly to try the experiment. I have one now in my mind, whose head stands eminently high for his scientific acquirements. Yet if my friend "Echo" should live, I predict that he will have an opportunity at some early future to write its obituary, and to exclaim, as he reasonably did before, where is it now? and the answer will be the same, echo will answer where! Respectfully, &c.,

Newton Centre, June 17.

W. A.

For the New England Farmer.

FEEDING STOCK.

MR. EDITOR:—The experiments in cutting fodder for stock published in the late numbers of your excellent paper are very interesting and the results quite worthy of notice. But the most remarkable article relating to this subject appeared in your 25th number, copied from the *Wool Grower*. Though doubtless never intended to "pull wool" over the eyes of any one, it savors somewhat of the marvellous. In fact, though never prone to quote Latin, on reading it I did exclaim, with all due emphasis *mirabile dictu*. And there does seem occasion for wonder. It is sufficiently wonderful that three cows should be kept 160 days on a daily allowance for each cow of 8 1-3 lbs. of hay and 9 quarts of shorts, but it is more wonderful still that they each continued to give 12 quarts of milk per day for the whole period; and it caps the climax of wonders that they "came out in the spring good beef." My own experience, though perhaps wanting in accurate experiments, would suggest twice the above amount of food, or its equivalent, as the proper quantity required in a similar case; but if we can all pursue this improved method with equally satisfactory results, the good time coming of which we hear so much cannot be far away. The knowledge of it would be worth the price of a farm to thousands. Who will say from his own experience that the plan is perfectly feasible?

INQUIRER.

Rehoboth, June, 1852.

REMARKS.—The article from the *Wool Grower* has had one desirable effect, that of calling attention to this very important subject. The truth is, we cultivate our crops and feed them out more by guess than any other way, and in consequence perform a great deal too much labor, and use far more than is necessary of its products to produce certain results. Exact knowledge is as necessary on the farm as in the workshop, in order to reap the largest profit from our labor. This knowledge is slowly dawning upon us; and until its full light come we must work and wait patiently, each one "magnifying his office," to the extent of his ability. We hope to hear from "Inquirer" again.

☞ Somebody says "physicians are the nut-crackers used by angels to get our souls out of the shell which surrounds them."

UNITED STATES CENSUS.....PRINCIPAL AGRICULTURAL PRODUCTIONS OF 1849.

STATES.	Bushels Wheat.	Bushels Ind. Corn.	Pounds Tobacco.	Pounds Wool.	Pounds Butter.	Pounds Cheese.	Tons Hay.	Bushel. Flaxseed.	Pound- Map. Sug.
Maine.....	867,930	1,741,715	.....	1,366,866	8,488,894	9,301,105	794,780	363	37,541
New Hampshire.....	185,658	1,733,670	50	1,108,476	6,977,058	3,196,563	598,554	94	1,232,429
Vermont.....	498,666	1,625,776	.....	3,499,087	14,198,665	6,755,066	763,579	307	5,159,641
Massachusetts.....	29,764	2,326,167	119,306	676,736	7,895,337	7,184,461	645,749	72	768,596
Rhode Island.....	39	516,183	.....	111,937	1,066,625	296,748	73,353	.....	.....
Connecticut.....	40,167	1,996,463	1,383,932	5 2,529	6,620,579	4,512,019	499,766	9,775	37,781
New York.....	18,073,357	17,844,808	70,332	10,091,567	82,043,523	49,785,905	3,714,734	58,824	10,310,764
New Jersey.....	1,666,216	8,605,396	.....	37,932	9,070,710	500,819	429,19	18,453	5,886
Pennsylvania.....	15,462,191	19,707,793	857,619	4,784,367	40,554,741	2,39,279	1,626,265	43,627	2,218,644
Delaware.....	466,784	2,668,696	.....	52,667	1,634,867	3,167	36,159	888	.....
Maryland.....	4,494,650	11,104,631	21,199,281	477,438	4,406,180	8,925	145,070	2,816	47,730
District of Columbia	17,370	65,280	15,000	.....	14,869	.....	1,974	.....	.....
Virginia.....	14,516,950	35,558,582	56,616,492	2,850,909	11,126,795	434,850	370,177	53,393	1,223,905
North Carolina.....	2,147,899	28,266,999	12,055,147	915,289	4,144,358	95,443	145,180	88,183	27,448
South Carolina.....	1,066,378	16,372,806	73,835	487,243	2,979,975	4,810	25,437	11	900
Georgia.....	1,066,784	30,428,540	420,123	988,8	2,641,074	46,391	23,427	565	50
Florida.....	1,325	1,993,462	982,584	2,435	375,853	18,321	2 6.0	.....	.....
Alabama.....	292,429	28,484,966	163,605	637,829	3,961,592	3,423	31,861	54	473
Mississippi.....	215,181	21,896,154	48,949	656,57	4,888,112	20,314	12,517	21	110
Louisiana.....	84	10,915,051	23,222	105,393	685,136	1,148	20,672	.....	260
Texas.....	42,448	5,796,735	60,770	122,118	2,319,574	92,018	8,297	16	.....
Arkansas.....	193,908	8,857,296	294,164	181,427	1,654,104	28,440	3,924	695	8 635
Tennessee.....	1,638,470	52,137,863	20,144,380	1,840,833	8,130,686	179,577	72,942	19,405	159,647
Kentucky.....	2,184,763	58,922,788	55,765,259	2,946,168	10,115,367	228,714	11,296	80,458	388,525
Ohio.....	14,967,656	59,798,750	10,489,967	10,629,607	34,180,458	21,350,458	1,360,686	185,591	4,691,643
Michigan.....	4,916,706	5,620,215	2,225	2,047,364	7,043,794	1,012,551	394,717	1,166	2,423,987
Indiana.....	6,635,474	52,687,564	1,085,146	2,502,763	12,748,186	666,986	402,731	35,803	2,921,538
Illinois.....	9,433,965	57,179,283	844,129	2,129,139	12,605,554	1,293,58	506,011	11,873	210,078
Missouri.....	2,443,940	35,709,492	17,038,364	1,631,182	7,768,194	961,587	116,264	13,439	171,943
Iowa.....	1,912,074	8,475,027	2,012	363,398	1,933,128	198,444	84,598	2,182	70 680
Wisconsin.....	4,292,306	1,933,378	768	243,065	888,816	440,961	295,927	824	661,963
California.....	98,282	90,062	1,000	4,900	705	150	2,038	.....	.....
Minnesota.....	3,423	16,545	.....	260	1,100	.....	2,069	.....	1,250
Oregon.....	238,688	2,928	225	29,596	211,734	36,030	373	.....	.....
Utah.....	103,441	9,144	.....	8,897	75,064	32,646	4,288	5	.....
New Mexico.....	196,575	355,795	1,118	82,641	101	5,887	.....	.....	.....
Total.....	104,799,230	591,586,053	199,532,494	52,422,797	312,202,286	103,184,585	13,605,384	567,749	21,79,263

AGRICULTURAL PROGRESS OF THE UNITED STATES.

The following letter, addressed to the editors of the *National Intelligencer*, Washington, and published in that journal, contains facts interesting to the American people:

TO THE EDITORS OF THE NATIONAL INTELLIGENCER:—The statistics of Agriculture, so far as they have been published from the Census Office, disclose many instructive facts. To promote the farming interest, and bring some of the most prominent features of this branch of national industry under the eye of legislators and statesmen, I respectfully solicit a small space in your paper to call attention to the progress made by a nation of farmers.

Maize is the most important crop grown in the United States. It is one of the staples of every State and Territory, not excepting Oregon, whose climate is least friendly to this American cereal. The United States census of 1840 makes the corn crop of the year preceding 377,531,875 bushels. The census of 1850 shows that the crop of 1849 was 591,586,053. Increase, 214,054,178 bushels. These figures indicate a gain of fifty-seven per cent.; while the increase of population was not far from thirty-four per cent. Corn being one of the most profitable crops grown anywhere, I have studied its increase and decrease in the several States with much interest; but a due respect for the numerous claims on your columns forbids an extended notice of even the most abundant and remunerating product of our national industry. Allow me, however, to say that New York produced in 1839, 10,975,286 bushels; and in 1849, 17,944,808 bushels. This, for an old State whose

rural population increased but little in the last decade, is a large and creditable gain. It is one of the many good fruits of her excellent agricultural societies, known all over this extended Republic, as well as in Europe.

Pennsylvania has advanced her corn culture considerably, although less than New York. Her crop in 1839 was 14,240,022 bushels; in 1849 it was 19,707,702. Gain 5,467,680 bushels. She will do better in the present decade.

Georgia has sustained an agricultural journal for the last nine years, and a flourishing State society and others some five years. Her corn crop in 1839 was 20,905,122 bushels; in 1849 it was 30,428,540. While Georgia has added to her annual harvest of maize 9,523,418 bushels in ten years, South Carolina has increased hers only 1,549,503.

Ohio has seventy well organized agricultural societies, and an efficient board of Agriculture. Her corn crop in 1839 was 33,668,144 bushels; in 1849, it was 58,922,783. Gain in the ten years, 25,354,639 bushels.

These official statistics speak volumes in favor of agricultural societies, and legislative aid for their support. They are composed of practical reading farmers, and I am very happy that men of this stamp are making an earnest effort to organize a national agricultural society. Should they, in its feeble infancy, ask for a little assistance from Congress, it is to be hoped that such small aid as State Legislatures grant to State societies will not be withheld. To say nothing of the large increase in her grain crops, New York, by giving some forty-five societies less than \$8,000 a year, has increased the products of her dairies over fifty per cent. The recent census shows the immense product of over eighty-two million pounds of butter. (82,043,828

lbs.) Cheese 49,785,905 pounds. In the production of these articles, the gain from buttermilk and whey in pork-making amounts to millions of dollars.

Unlike the farmers of New York and Ohio, those of Virginia have failed to discover the advantage of united efforts for the promotion of agriculture. In 1839 the corn crop of Virginia was 34,577,591 bushels—in 1849 it was only 35,538,582. Gain in ten years but 960,991 bushels.

With a view to correct what I cannot but regard as an erroneous judgment in that noble Commonwealth, I state the fact, that from no other State in the Union has opposition been seen or felt to a national agricultural society. Intelligent business men combine their efforts and means to advance commercial, manufacturing, banking, railroad and educational interests; and why should not farmers unite their wisdom and labors to promote improvements in tillage and husbandry? The science of combinations is as applicable to agriculture as to any other business pursuit whatever. Isolated cultivators of the earth may increase their knowledge and improve their farming operations very little in the lifetime of a generation, but their progress will be so far exceeded by such as skilfully combine their individual powers, that the former will appear to retrograde, not advance.

DANIEL LEE.

For the New England Farmer.

THE SEASON—POTATO BALLS—PEACH LEAF.

DEAR SIR:—In testimony of my gratitude for your monthly lectures, instructions and counsels, please accept a few small notes—not bank notes, for these come into my pocket few and far between—yet such as I have I send.

1. *The season.*—Rainy, scowling April caused a late May planting, which was succeeded by chill winds and drought. Corn and potatoes have come up slowly and partially, and some farmers have planted their corn the second time. Two or three pleasant rains, but not copious, have helped the growth, but continued dry weather has succeeded. A trying time this for oats and grass seed.

2. *An agricultural lecture.*—This was given confidentially to the auditors, here, in April, at one dollar per ticket. Of its merits I am not able to judge, not having heard it. Shallow planting, said to have been recommended, has proved unpropitious to those who have tried it. A farmers' club seems to have grown out of it, and your namesake, the weekly *N. E. Farmer*, is welcomed as an adviser, in this fraternity. I hope for good results.

3. *Potato-balls.*—I shall plant them no more to get a healthier race, for their tubers rotted the first year of my experiment.

4. *A stone rake, or harrow.*—An implement of this sort, constructed to loosen and collect cobblestones, that constitute a large portion of the soil in some of our gardens and fields, I should like to see in operation. It would be a great labor-saving improvement, and would enable us to plant seed without covering them with stones, and would deepen the soil. Our stones show no signs of decomposition, and can be spared.

5. *Tobacco.*—Will some agricultural chemist solve this problem, founded upon the opinion that tobacco has not yet been applied to its best and most appropriate use. If all the tobacco, chewed,

puffed off in smoke, spirted off and snorted off, from all the mouths and noses in one single town of New England, was duly combined with suitable other ingredients, in one grand compost, from how many acres of land would it be sufficient to exterminate cut worms, cornstalk-borers, wire-worms, curculios, *et id omne genus*? That weed is an abomination to almost all insects, I apprehend, and also to all quadrupeds unless to a new race of cows, of which you, sir, inform me this present month. Can they be of near kin to those, of which I once heard found at Provincetown, much addicted to catching and eating fish in the surf?

6. *The peach leaf curl.*—I mark it upon a seedling of one year's growth, but know neither its cause nor cure. There evidently is a derangement in the vegetating process both of branch and leaf, preventing the regular formation and expansion of the woody fibre, and the leaf seems gorged, and unnaturally distended with sap, even to mortification. The leaf assumes also the appearance of mildew. Is my seedling like a rickety child that has the healthy formation of bone prevented by lack of right materials duly combined, so that the healthy organization of wood being arrested, the vegetating process assumes this misshapen form?

Now, *Mr. Farmer*, lest my notes prove quite below par in your market, this experiment with a single half dozen you will deem quite sufficient for the present.

Truly Yours,

J. LEX.

Salisbury Center, Conn., June 14th, 1852.

REMARKS.—Thank you, friend Lee, not only for the matter but for the manner. This sententious and concise mode of writing, introducing new facts and dropping a remark here and there upon them, is attractive, and therefore likely to be instructive. Your remarks suggest several things in our own mind which we should be happy to say, but have not the leisure at this moment. We hope to hear from you frequently.

WOOD LAND.

Fifteen acres of wood and timber land will furnish a farmer his ordinary timber and wood for two fires. Ten cords of wood will suffice for any man to keep two fires the year round provided he has tight rooms and good stoves. We have kept two fires since the first of November in two large rooms, and have not yet burnt three cords of wood, and we can assure you that we like a good comfortable fire. The farmer should commence on one side of his lot, and cut the wood clean as he goes. In this manner the young shoots come up alike as they receive the sun alike. Now say there are thirty cords of wood to an acre; if he cuts ten cords of wood a year, it will take him three years to cut off the wood of a single acre—and it will take him forty-five years to cut the wood off from his lot of fifteen acres. At the end of forty-five years, he may go back to the first acre he cut, and cut thirty cords to the acre. On our ordinary upland, wood will grow to thirty cords to the acre in thirty years.

Thirty-four years since, we recollect of assisting in clearing fourteen acres of wood-land, and getting the same into winter rye. After the crop of winter rye was taken, it was pastured for a year

or two, and then suffered to grow up. The growth was white oak, red oak, yellow oak, chestnut and maple. Seven years since, that *same rye field* was cut over, and there was not a single acre of it but produced thirty cords to the acre! And this in twenty-seven years!

HAY—ITS COMPOSITION.

"Hay," remarks a late author, "is composed of four distinct parts, each of which has a very different nutritive value. It is of consequence, then, that in a specimen taken for the determination of the azote it contains, each of these parts should be properly represented. I distinguish in hay—

1. The woody stems.
2. The slender straws or stems, to which the leaves are attached.
3. The leaves, flowers and seeds.

A small portion of hay is taken, and carefully sorted, and the parts are weighed separately. In a specimen of strong meadow hay, made in 1841, I found:—

	LB.	DRACHMS.
Woody stems.....	2.404	Taken for analysis.....680
Straws of very slender stems.....	8.493	Taken for analysis.....239
Flowers, leaves and a few seeds.....	1.764	Taken for analysis.....497

Mixture analyzed.....1.416

ANALYSIS.

Azote, per cent.....	1.19
Contract hay for Prussian Cavalry, 1840.....	1.31
Hay from Alsace of 1835.....	1.04
Do. do. 1837.....	1.15

Mean of four samples, in the state in which it was consumed.....1.15."

The above analysis was conducted by the chemist BOUSSINGAULT, and not only shows that hay differs considerably in the best qualities of the article, but that there is also a difference in the nutritive qualities of the several members of the grass plant.

TUSSAC GRASS.

This grass derives its name from the peculiar habits of growth which characterize it, the radicals and smaller roots becoming inoculated, or closely matted, and forming with the pedicles, or root stalks, a large tuft, denominated "*tussac*." These masses, formed by the columnar portions of the plant, are generally, in fact, always isolated as to position, and sufficiently separated to admit of a person's passing between them; often forming walks, arbors and arcades of surprising beauty, and furnishing grateful shelter to numberless birds, and not unfrequently to man. Bougainville asserts that he frequently obtained shelter in this manner while wandering in the "*tussac* lands"—the inclined stems furnishing a roof, and the dry leaves supplying a comfortable bed. These remarks, however, apply to the *tussac* grass only in its most perfect and luxuriant state. In this country, although very vigorous and productive, it rarely attains a height of more than a few feet. It was supposed by the earlier botanists to be a *fescue*, and

we see it referred to in some old works under the name of *Festuca flabellata*, and *Festuca caespitosa*. It is now, however, regarded as belonging properly to the genus *Dactylis*, and we find it alluded to by Foster under the appellation of *Dactylis caespitosa*. It has a generic relationship to the *Dactylis glomerata*—"Cock's foot," or "Orchard grass." It is a perennial product, and has been found to be extremely well adapted to orchards and other shady localities, where the ordinary grasses rarely succeed. The following botanical description may be of interest to some of our readers:—

"Spikelet composed of three or four florets, of a pale, yellow green color. The calyxine glumes are lanceolate, acuminate, longer than the spike of flowers, slightly kuled, shortly ciliated on the back, three and a half inches long, the margins a little involute, and as well as the apex, membranous and transparent, the superior one a little longer than the other, three-nerved, the nerves ciliated. The lower glume or palea of the corolla, concave, compressed, and sharply kuled; bluntly trifid at the apex, five-nerved. Stamens three. Anthers pale yellow. Ovary nearly ovate and glabrous. Fruit elongate-ovate, or almost cylindrical, slightly trigonous, of a pale yellow color and smooth."

Several experiments have been made with this grass, in this country, and generally with good success. It yields a vast amount of fodder, as it will bear being cut two or three times—some say five or six during the season. The leaves and even the stalks contain much saccharine matter, which renders it very grateful to stock of every kind. Mr. Hooker, in remarking upon the qualities of this grass, says:—

"The Falkland Islands have long been known to be inhabited by many wild cattle and troops of horses, and these are principally supported by this grass, which they prefer to every other kind of food. Not only these, but every herbivorous animal in these regions, not only devours the *tussac* grass with avidity, but fattens on it in a short time. This predilection is shown for it not only in a green state, but when dried, inasmuch that cows and horses often eat the thatch from the roofs of the houses when it so happens that it is composed, as it often is, of *tussac* grass."

For soiling, many of the cattle-feeders of Great Britain consider it superior to all other grasses, and its cultivation has consequently, in that country, extended with great rapidity, and with eminent benefit to its agriculture. From its peculiar habits and structure it is well adapted to light lands—such as sandy plains where there is a deficiency of *humus*, and where most other grasses, not even excepting the indigenous varieties, refuse to grow.

REPORT OF THE WORCESTER COUNTY SOCIETY ON FEEDING FARM STOCK.—The attention of the reader is again called to the valuable report from the Worcester Society in relation to feeding farm stock. It is the best report of that character that has ever been published in the State.

KETCHUM'S MOWING MACHINE.

Improvement
 very great with
 reached every
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 doubtless have
 aid the process
 individuals have
 are too lax to

Amid these
 share, perhaps, of the improvements which have
 been made; and what is encouraging, while he is
 benefited so much by labor-saving machinery, his
 products command in the market a higher price
 than ever before.

The cut at the head of this article represents a
 new implement for the farm, and one of great im
 portance. It is said to be simple and efficient;
 not well suited for a rough surface, but working
 well on rolling land, or even side hills, if smooth.
 It will cut an acre of grass an hour, even and

handsomely, spreading it as it proceeds, ready for
 drying.

The usual period of good hay weather is not of
 long duration, and therefore most farmers feel
 obliged to work very hard while it continues; and
 even then considerable grass is cut in an unfit con
 dition, some of it too early and some too late.
 The horse rake has proved a remedy for this in
 some degree, and the mowing machine will still

further lessen the difficulty. The dark points in the engraving stand out before the teeth, to protect them and untangle the matted grass. The teeth are the white points, like saw teeth. They are moved back and forth by the action of the wheels with great rapidity. The machine weighs about five hundred pounds, and is easily drawn by two horses.

For the New England Farmer.

IS ASPARAGUS A MARINE PLANT?

BY CHARLES SIEDMOF.

Asparagus is generally believed to be a marine plant. I have very often inquired of such as asserted this, on what shore it was found growing wild; I could not, however, obtain any definite answer, the general result of my inquiries being this, that it was *thought so*, and that *the books said so*. It is incredible, how much there is believed on mere authority; but human authority, however great, is always injurious to truth, which never will or can be impaired by a thorough, but of course sincere, investigation. Truth will defend itself. There is no difference in the *absolute* value of single truths, because their contrary is error; still there is a great difference as to their practical importance.

Being unable to settle the question in regard to asparagus by literary means, I cannot but resort to what I have seen and experienced myself. Some ten years ago I travelled on foot nearly all along the sea shore from Holland to Denmark for scientific purposes, especially for the preparation of a work on ornithology which was published in 1845. I spent weeks and months on islands in the North Sea, visited the shores of the Baltic and of the Mediterranean. I have been engaged for years in collecting the marine plants of northern Germany for a friend who intended to publish a special flora of them. But *I have never met with a single asparagus plant near the seashore in northern Germany.*

There is a ridge of hills to the South of the Harz mountains, running parallel with them, and called "Die Hainleite." I was born in a little village among those hills, and recollect very well, that not very far from it, but nearer to the town of Frankenhansen, there was such an abundance of asparagus plants in the woods, that children used to cut them there and sell them in the towns adjacent. I have cut them myself many a time, when a boy, and upon inquiry whether asparagus had always grown on those hills, I was informed they had been there from time immemorial. The soil where they grow there, is calcareous.

In making asparagus beds in Germany, we dig them five feet deep, fill them with the richest possible soil, but which must be free from undecayed manure. This soil is previously mixed with some air-slacked lime and brick-dust. A friend of mine in northern Germany, who was desirous of having an asparagus bed, but who could not procure the necessary manure, followed the hint he took from my relating him, that I had seen the asparagus growing in the woods, and filled his bed with brushwood and friable, very sandy soil from his garden. His asparagus were the finest I have seen. I have already prepared a bed here for the same experiment, it being worth trying.

Lancaster, April 16, 1852.

For the New England Farmer.

FELDSPAR.

EDITORS N. E. FARMER:—I wish to inquire of you, what are the qualities and properties of *feldspar* that promote the growth of vegetable matter, such as is usually raised on farms in Massachusetts. Also, what are the component parts of *feldspar*. In New Braintree, and the towns around there, there are large quantities of decomposed *feldspar*, and many of the farmers think, that it supplies the waste caused by the growth of vegetable matter. Please explain, and answer these inquiries, and oblige your friend, PHILLO.

North Brookfield, June 8, 1852.

REMARKS.—Feldspar is of two kinds, viz., potash feldspar, in which potash is the alkali: this is the common kind: soda feldspar, in which soda is the alkali. There are other varieties mentioned, but their composition is not peculiar. The composition of feldspar is silica, 65.21—alumina, 18.13—potash, 16.66. A crystallized specimen, analyzed by Vauquelin, gave silica, 64—alumina, 20—potash, 14, and lime 2. All these are good; the potash is valuable on all soils, because it enters, more or less, into all plants. See the article on alumina in a late number. The decomposed feldspar will undoubtedly be a valuable dressing on any of our soils.

DISCOVERY OF A NEW GUANO ISLAND IN THE SOUTH PACIFIC.

A new and extensive guano deposit has recently been discovered upon an island in the South Pacific Ocean, and is causing considerable speculation in the commercial circles of London, as we learn from the *Shipping Gazette*. It appears that several months ago, the fact of the existence of guano in this new locality was communicated by an old whaling captain to his owner, who determined that the knowledge should be kept a secret until more fully substantiated, and if found correct, then to place the discovery before the shipping interest. With this view, he gave instructions to the captain of a vessel he was dispatching upon a voyage round the Horn, to search for the island in the latitude and longitude furnished him, and to report to him all the particulars from the first port he could make. So faithfully and successfully have these orders been fulfilled, that the owner has had the original statement fully confirmed, and received samples of the guano taken from the spot by his own captain. These samples have been analyzed by an eminent London chemist, with the following results:

74	parts	salts of ammonia.
84	"	animal organic matter.
24	"	sulphate of muriate of potash and soda.
51	"	phosphate of lime and phosphate of magnesia.
18	"	sand.
11½	"	moisture.

100

By comparison of this analysis with that of the best Peruvian guano, now selling at £9 5s. per ton, the value of the new article was found to be about £5 10s. to £6 per ton. The quantity deposited is said to be so considerable that no supposition can be safely ventured upon, and the island, from not being near any coast, is quite free from

the dangers attending the loading at Ichaboe, and other islands on the west coast of Africa, from the setting in of rollers.

A discovery of this description, at a time when so many vessels are lying unemployed at San Francisco, and so many others, idle or seeking, in the Australian colonies, and also in India, we look upon as a means of profitable employment which many others will be likely to take advantage of. The island, it is said, is at present unclaimed by any government, and the British flag was the first banner planted upon it.

For the New England Farmer.

CHEMISTRY—VEGETABLE PHYSIOLOGY.

In a few remarks which I recently transmitted for your valuable and instructive columns, I made allusion to the comparative advantage of a knowledge of the sciences of chemistry and of vegetable physiology to the practical farmer. The opinion was then expressed that the latter science had been too much overlooked, and the former made too prominent, in most of the writings and discussions upon scientific, and improved agriculture. With your permission I desire to pursue the subject of the application of chemistry to agriculture a little further. And I intend here to start a question more for the purpose of having it resolved by some learned chemist, than with any established conviction in my own mind on the point. I believe you will concur with me in considering the question I shall propose of sufficient importance for a full and scientific explanation. The science of chemistry is certain. Its results are not questionable. It is an exact science. But in its application to agriculture, whether to soil or vegetable, there is room for error or mistake. And I make a question here, not of the truth and accuracy of chemical knowledge, but of the logic by which the chemist is guided in his application of chemistry. His reasoning is this. The plant is constituted, in part, of lime; *therefore*, lime must be supplied to the soil, for the aliment of the plant. The grasses and grains are composed in large part of silica, in their stems *therefore*, silica must exist in the soil of your wheat and grass lands, or your crop fails. Now the chemistry of the two propositions is undoubted, but, to my mind, the *logic* is very questionable. The conclusion does not lawfully follow from the premises. Let us try it by two or three examples. The seeds of plants are largely composed of starch;—the tubes of potatoes contain a great proportion of the same ingredient. *Therefore*, starch must be supplied to the soil for all plants, especially for potatoes. Most plants contain sugar; *therefore*, the farmer must administer sugar to the soil. The cow contains in her vessels a large quantity of milk; *therefore*, she must be fed on milk. I think these examples are sufficient to show where, in my view, the uncertainty which I mean to indicate lies. If lime or silica do not exist in form in the soil, the constituents which compose them, or which, when assimilated in the economy of the plant, will compose those substances, do exist there separately, and will they not, separately, form appropriate aliment for the plant? The tissues of the plant constitute a laboratory wherein lime, and starch, and sugar are made, by the assimilat-

ing function of the vegetable life, as the vessels of the cow form a laboratory in which milk is, in like manner, made.

The elements of all life, animal and vegetable, exist in the earth. No element has yet been discovered by the scrutinizing analyses of the chemist, which does not exist in the earth. Science proves the declaration of scripture that man was made of the dust of the earth. The elements entering into his physical nature are all there. And so are there found in the earth all the elements of all created things, of all the animal and of all the vegetable world: of all organized matter. Man's bones are composed mostly of lime. But he does not eat lime;—nor is it necessary, in order to sustain his life, or preserve his health. The alimentary organs of animals and vegetables take up the elements, no matter whether connected in the particular form, or existing separately,—and after they are so taken up, they are separated, and made to pass into different parts of the system, as in man the lime into the bone, the iron into the blood, and so on, entering into new combinations as they are received into different parts of the frame. Is not the analogy between the animal and vegetable world complete in this point? Is there any more necessity for feeding plants with lime than cows with milk? Is not the reasoning in this matter erroneous and illogical?

I have suggested this view with a two-fold object. If my question has anything substantial in it, it will show, that the science of chemistry is not entitled to the very prominent, not to say exclusive importance, to the working farmer which has been claimed for it;—and secondly, if my view is incorrect, I hope it will, at least, be considered of sufficient interest to receive an explanation at the hands of some learned chemist. You will agree with me that it is highly important that our working farmers should not be led into error by the guides to whom they look for instruction.

To my mind, a sufficient explanation of the doubt here raised is not found in the fact that the substances are of a different nature. This will be the *ready* answer: Starch and sugar are vegetable products, and milk is an animal product; but lime and silica are earthy, mineral, and, as commonly designated, unorganized matter.

But my view of the processes of nature forbids me to be satisfied with that answer. By the system of permutation and combination, the fifty-five elements of nature, as they become united in different proportions, form different compound bodies. The same elements, united in the same proportion, that form lime, cannot form anything else; and whenever and wherever they become combined they form that substance. They must form it equally in the earth, in the vegetable tissue, and the animal frame. A synthetic process is constantly going on within the earth by which the different elements become united, and by which union, according to the proportions entering into the combination, lime and other compound bodies are formed. Now when the same elements become united in the same proportion, as, by the same synthetic process, they may, in the tissues of the plant, they must there form the same substance, and are incapable of forming any other. Is it not so? Upon this view I base my system of cosmogony. The vegetable creation, "whose seed was in the earth,

after their kind," was formed at the first in this manner. When the particular elements became united in the particular proportions that form an apple seed, or the seed of any other vegetable, that seed was formed in the earth. And the same effect happens now, unless, by the changed condition of the earth, that union can no longer take place. I have introduced this reference to a system of cosmogony, which is, I suppose, peculiar to myself, and which is not essential to the point which forms the subject of these remarks, for the purpose of more fully illustrating my idea of the synthetic processes of nature. According to that idea, if lime or other compound is a constituent of any particular plant, it may be formed within the plant itself, if its elements are introduced into it, and it is not necessary that it should be introduced in the compound form.

By the process which is above supposed, ammonia is supplied to plants. It is manufactured in the vegetable laboratory. This is a mineral matter, not a vegetable product, more than lime. But it is made from its elements in the tissues of plants. The plant takes up carbon, oxygen, hydrogen and nitrogen. The carbon uniting with a portion of the oxygen in the plant and with the oxygen of the atmosphere, passes away in form of carbonic acid. The hydrogen in part unites with the remainder of the oxygen and is evaporated; and a portion of hydrogen remaining enters into combination with the nitrogen and forms ammonia. Thus this earthy matter, the most essential to the growth of the plant, is made within it, no less than the vegetable products of starch, sugar and gum. Is there any reason why lime, potash and soda, should be taken up in form, and should not be formed in the plant, any more than ammonia?

I hope some of your scientific correspondents will consider the point here suggested to be worthy of a full discussion; and will furnish it for your paper.

W. J. A. B.

Essex, Mass., 1852.

For the New England Farmer.

WARTS ON PLUM TREES.

MR. EDITOR:—Please inform what the cause is of bunches showing themselves on plum trees; whether it is owing to the soil or not?

Springfield, Vt., 1852.

G. W. P.

REMARKS.—Ascertain the cause and the cure, friend P., and it shall be a snug income to you. We believe the warts are occasioned by insects, but whether the curculio or some other, we have not been able to decide. We have trees growing within a few rods of each other, one portion of which is annually disfigured with warts, while the other portion is smooth and clean.

Grassiers in the United States must look to their laurels. An ox raised on Prince Edward's Island was recently sold at St. Johns, Newfoundland, for the sum of forty pounds and ten shillings, or nearly two hundred dollars.

The Canadian Agricultural Fair is to be held at Toronto, and will last from the 21st to the 24th of September. The sum of \$6000 is to be awarded in prizes.

UNITED STATES

AGRICULTURAL CONVENTION.

Before giving the details of the business of the Convention, we shall be excused, we trust, for making a very brief statement of facts relating more particularly to the action of a single State.

Massachusetts took an early and efficient interest in the cause of agriculture. The first association for its promotion in America was founded in this commonwealth, in the year 1792, and incorporated by an Act of the General Court of that year. In 1797, this association instituted the *Agricultural Journal*, a publication which continued more than thirty years. It took measures for the institution of county societies, and contributed to the establishment of the Professorship of Natural History, and of the Botanical Garden, in the University of Cambridge. In 1818 began a series of public addresses, pronounced successively at its autumnal celebrations, by JOHN LOWELL, JOSIAH QUINCY, RICHARD SULLIVAN, HENRY COLMAN, TIMOTHY PICKERING, JOHN C. GRAY, JAMES RICHARDSON, EDWARD EVERETT, HENRY A. S. DEARBORN, all honored names. The efforts of these pioneers in the work have been seconded and continued to this day by many of their successors with a steady perseverance and a noble enthusiasm. Time, talent and treasure have been devoted with liberal generosity to develop new resources in the earth and air, to propagate new fruits and flowers and perfect those that are indigenous. This enthusiasm has led some of them to the Old World to examine the breeds of cattle, swine, sheep, and horses there, to mingle the blood of the best in the New World and improve the races here. And in the gardens and fields and on the hill-tops throughout the State may be seen the evidences of their philanthropy. The names of PERKINS, PHINNEY, SALTONSTALL, WILDER, PROCTOR, D. S. KING, HITCHCOCK, and many others now active in the work may well be ranged in the rank of honor with those who have performed their part and retired from the interesting field of labor.

In 1819, the commonwealth appropriated two hundred dollars annually to every county society which should raise the sum of one thousand dollars for the promotion of agriculture, and in like proportion for any greater sum, not exceeding three thousand dollars. These societies are now fifteen or sixteen in number in the State, all receiving the State bounty, and exerting an influence on our hard and unpromising soil, by reclaiming the bogs and fens and swamps, and laying up its granite in dwellings of architectural beauty as well as comfort; in durable barns for stock, and in spanning the rivers with permanent bridges, which is rapidly changing the surface into delightful landscapes, studded with the farm-houses which

breed men to make honor and prosperity to the commonwealth in all the walks of life.

Besides these the town societies in the State can be exerting scarcely less influence than those of the counties. They are numerous, well attended by practical farmers and earnest men. Their proceedings are often published in the village newspapers, and are thus carried to the fireside of all. With such constant and earnest application of both mental and physical power, well may it be believed that soon shall even the waste places and the "desert blossom as the rose."

During the year 1851, a *Massachusetts Board of Agriculture* was formed, of delegates from the old first society of the State, and from the county societies. The meetings of the Board have always been attended by men eminent either for their learning in geology, chemistry and physiology, or for great experience in the operations of the farm in all its departments. Early in its discussions, the expediency of establishing a *United States Agricultural Society* was suggested, and some of the benefits which might be expected to flow from such an association were considered. On the 14th of January, 1852, the Massachusetts Board requested its President, the Hon. MARSHALL P. WILDER, to enter into correspondence with the presidents of State and other agricultural associations in relation to the expediency of calling a NATIONAL CONVENTION. The result of this correspondence was the gathering of the convention at Washington, whose doings we are about recording below.

As we intend sending a copy of these proceedings to each of the delegates who attended that convention, we have thought proper to preface them with a brief sketch of what Massachusetts has done in the noble cause, to show them that, in honoring one of her sons with the first Presidency of the *United States Society*, she sees in them a just appreciation of her efforts "to improve the soil and the mind." It can scarcely be supposed that any man in the country gives the great subjects of agriculture, horticulture and floriculture, more thought, more time, or more substantial aid than he upon whom the convention bestowed the honor of acting as its first President. He will bring wisdom, large experience, and moderation to its counsels, and exert a powerful influence in preserving the representatives of this galaxy of States in brotherhood and harmony.

The convention met at Washington, in the building of the Smithsonian Institute, at 10 o'clock in the morning, on the 24th day of June, 1852.

Judge WARR, of Penn., was called to preside over a temporary organization, a roll of the States was called, to ascertain the number and names of delegates representing the various agricultural societies of each State, when it was found that there were present—

From New Hampshire, eight delegates; from Vermont, three; from Massachusetts, twenty-six; from Rhode Island, three; from Connecticut, four; from New York, twenty; from New Jersey, two; from Pennsylvania, five; from Delaware, six; from Maryland, twenty-three; from Virginia, ten; from North Carolina, one; from Louisiana, two; from Ohio, twelve; from Tennessee, three; from Indiana, one; from Illinois, two; from Arkansas, one; from Michigan, four; from Texas, one; from Wisconsin, two; from the District of Columbia, eleven; making the total number of delegates present 151, representing twenty-three States and Territories.

The committee appointed to nominate permanent officers for the convention submitted the following nominations:—

For President—MARSHALL P. WILDER, of Mass.

For Vice Presidents—Henry Wager, of N. Y.; Frederick Watts, of Pa.; Charles B. Calvert, of Md.; Wm. F. Hunter, of Ohio; George W. Nesmith, of N. H.; John H. Throckmorton, of Va.; H. K. Burgwyn, of N. C.; T. J. Rusk, of Texas; James Duane Doty, of Wis.

For Secretaries—William S. King, of R. I.; B. P. Johnson, N. Y.; J. A. Warder, of Ohio; J. D. B. DeBow, of Louisiana.

The report having been unanimously accepted—Mr. WILDER, amidst much applause, took the chair, and addressed the Convention as follows:

Gentlemen of the Convention:—I will not interrupt the proceedings of this body by any extended remarks from the chair; but I cannot forbear to tender to you my heartfelt gratitude for the honor you have conferred upon me in selecting me to preside over your deliberations—an honor which is connected with a pursuit which has ever laid near my heart.

Permit me also to express my great gratification that there are present so many members representing the agricultural interest of this great Republic—some gentlemen coming from different and distant parts of the Union, at great personal sacrifice; but, whether from the North or the South, the East or the West, I extend to each of you the hand of fellowship, and I greet you as brothers in a common cause.

Gentlemen, we come here with no sinister motives; we have no political arguments to advance; we have no sectional or party purposes to promulgate, but we are here for more important purposes. We are here to advance an art coeval with the existence of the human race—an art which employs eighteen millions of our population, and four-fifths of all the capital in our fair land—an art which lies at the very foundation of national and individual prosperity and wealth, the basis of commerce, of manufactures, and of industrial pursuits. We are an agricultural people; our habits, our dispositions are rural. I rejoice that it is so, and I pray that it may ever continue to be so. Our country embraces every variety of soil, and is capable of producing most of the products of the torrid and temperate zones; and with a suitable application of science to this art, and a wise division of labor, with proper governmental aid, there is no reason why American agriculture may not sustain competition with that of any other nation of the civilized globe.

The progress of agriculture, as you all know, gentlemen, has been slow in the United States, but a new era has now commenced. The old worn-out systems of cultivation which have been followed by father and son, and from generation to generation, are now to be swept away, and science is to take its place in aid of honest industry. I rejoice, gentlemen, that we live at this day; I rejoice that the seed planted by the immortal Washington, and which has been watered by thousands of other eminent agriculturists, is now taking root, and that we live in our day to realize some of the proud results of their hopes.

Much of the progress which has been attained in our country is the result of individual enterprise, aided by the agricultural press; but the great motive power is confederated action, is associated effort. Gentlemen, we have met on this occasion to avail ourselves of this powerful impetus. At no period in the history of our country has there been such an assembly collected for the purpose of considering those objects for which we are brought together, and there has been no opportunity which is so favorable to the interests of the farmer.

Permit me again, gentlemen, to tender you my thanks for the distinction you have conferred upon me, and to say that in the course of our deliberations I may, with your permission, participate in your debates. [Applause.]

It was then moved that a committee be appointed to prepare a form of constitution for the organization of a United States Agricultural Society, and to report such other business to the convention as may properly claim its attention—said committee to consist of seven members.

Hereupon a long debate ensued, which ended in negating the motion. Another motion was then made that a committee of one person from each State be appointed, which was agreed to, and thereupon the President appointed the following gentlemen to constitute said committee:—

Messrs. Holkham, of Delaware; Douglas, of Illinois; J. A. King, of New York; Dawson, of Georgia; French, of Massachusetts; Steele, of New Hampshire; Thurston, of Rhode Island; Hubbard, of Connecticut; Stevens, of Vermont; Elwyn, of Pennsylvania; Culvert, of Maryland; Campbell, of Ohio; Hancock, of New Jersey; Callan, of the District of Columbia; G. W. P. Custis, of Virginia; Burgwyn, of North Carolina; Taylor, of Alabama; DeBow, of Louisiana; Spencer, of Indiana; Mallory, of Kentucky; Bell, of Tennessee; Weston, of Wisconsin; McLane, of California; Pickhard, of Maine; Seaman, of Michigan.

Several subjects were then referred to the committee just appointed, and the committee was instructed to prepare a memorial to be presented to Congress relative to an agricultural bureau.

During the absence of this committee from the hall of meeting, several gentlemen entertained and instructed the Convention by delivering interesting addresses on the condition of agriculture in their respective States.

Mr. CALHOUN, of Massachusetts, announced the Marshfield farmer, DANIEL WEBSTER, as a delegate to the Convention; which was received with much applause.

Mr. ELWYN, of Pennsylvania, from the committee appointed to prepare business for the Convention, and report a constitution for the National Agricultural Society, submitted a constitution, which was read, and considered by sections.

Some discussion ensued as to the time and place where the Society shall hereafter meet, when an amendment was adopted providing that the meetings of the Society shall be held on the first Wednesday in February, in the city of Washington, the Executive Committee, with the assent of the Society, to have the power to call meetings elsewhere.

The Convention having adopted the constitution, then adjourned until seven o'clock in the evening.

REPORT OF THE BUSINESS COMMITTEE.

The undersigned, in order to improve the agriculture of the country, by attracting the attention, eliciting the views, and combining the effort of that great class composing the agricultural community, and to secure the advantages of a better organization, and a more extended usefulness among all State, county, and other agricultural societies, do hereby form ourselves into a society, and for its government adopt the following

CONSTITUTION.

SEC. 1.—The name of this association shall be "The United States Agricultural Society."

MEMBERS—DUES.

SEC. 2.—The society shall consist of all such persons as shall signify to any officer of the society a wish to become a member, and who shall pay two dollars to the treasurer of the society and a like sum hereafter, of delegates from the State agricultural societies in the States and Territories and District of Columbia, who may be appointed to attend the annual and other meetings of the society, and who shall pay the like sum, and also of such honorary members as the society may see fit to elect. Each member shall be entitled to receive a Journal or publication of said society, containing an account of its proceedings and such additional matter as shall be deemed worthy of publication, free from any expense except postage. Twenty-five dollars shall entitle any one to the privileges of life membership and exempt him from any annual taxation.

OFFICERS.

SEC. 3.—The officers of this society shall be a President, a Vice President from each State and Territory in the Union and from the District of Columbia, a Treasurer, a Corresponding Secretary, a Recording Secretary, and a Board of Agriculture, to consist of three members from each State, Territory, and the District of Columbia, to be appointed by the Executive Committee of the societies of such States, Territories, &c., and where there be no such State Societies, to be appointed by the Executive Committee of this society. The President of the society shall be, *ex officio*, a member and President of this board and of the Executive Committee.

DUTIES OF OFFICERS.

The President shall have a general superintendence of all the affairs of the society. In case of his death or inability to discharge the functions of this office, the Board of Agriculture shall select a Vice President to act in his stead, and clothed with the same power, and shall perform the same duties as the President until the next annual election.

Vice Presidents.—It shall be their duty to advance all the objects of the association, in their several districts; to explain to agriculturists the character and objects of this association and endeavor to gain their co-operation and support; to watch the advance of practical agriculture, and to make known the results of the same by report or otherwise, from year to year.

Board of Agriculture.—It shall be the duty of this Board to watch the interests of agriculture, as they are or may be affected by the legislation of the country, and to make such reports, memorials and recommendations as may advance the cause of agriculture, and to promote and diffuse agricultural knowledge; to examine, and when necessary, report upon the practicability of establishing agricultural schools, colleges, and model farms; to set forth the advantages of agricultural and geological surveys, and to show the importance of the application of science to agriculture; to represent through their reports the relation of our agriculture to that of foreign countries and to endeavor to obtain information from such countries, to point out the advantage of introducing any new staples, seeds and plants, to obtain, so far as practicable, annual statistical returns of the condition of agriculture throughout the different States—all which information shall be published by said society, and form part of its transactions.

The Executive Committee shall transact the general business of the society; it shall consist of five persons, who shall designate the time and place for exhibitions, regulate the expenditures, and take such supervisory charge of the business of the society as may best promote its interests. This body shall elect its own chairman. Three members shall constitute a quorum.

Treasurer.—The Treasurer shall keep an account of all monies, and shall pay bills only after they have been audited by the Corresponding and Recording Secretaries, and a member of the Executive Committee, and countersigned by the President of the Society or Chairman of the Executive Committee.

Corresponding Secretary.—The duty of this officer shall be to correspond with persons interested in agriculture; at each stated meeting he shall read such portions of his correspondence as may be of general interest; and it shall be his duty to carry out and advocate the views of the Board of Agriculture in obtaining arranging, and publishing any information they may desire to have laid before the agricultural community.

The Recording Secretary shall keep a record of the minutes of the society and of its Executive Committee.

Sec. 4.—The annual meetings of the society shall be held at the city of Washington on the first Wednesday of February, in each year, when all the officers of the society for the ensuing year shall be elected by ballot. The Executive Committee, however, shall be competent, with the approbation of the society, to appoint occasional meetings to be held at other points. Fifteen members shall constitute a quorum for business.

Sec. 5.—This constitution may be altered at any annual meeting, by a vote of two-thirds of the members in attendance, provided not less than fifty be present.

At 7 o'clock on the evening of the same day, the Convention re-assembled. Very soon afterwards the committee came in with their report. It argued for the propriety and necessity of protection of the agricultural interest equally with the other great interests of the country, and had for its conclusion the recommendation of the establishment of a Department or Bureau of Agriculture by Congress.

Upon this a long and animated discussion took place, in which so much warmth of manner and feeling was at length manifested as to excite fears that the harmony of the meeting might be disturbed. Gentlemen from nearly every part of the Union took part in the discussion. The point of difference was, whether the Convention should memorialize Congress to establish a new Department in the government, viz.: a *Department or Agricultural Bureau*. Under this question many of the important political topics were introduced, such as the tariff, homestead bill, the naturalization laws, and Canadian reciprocity bill.

[At this moment Mr. WEBSTER entered, when the whole Convention cheered with great heartiness, while he was taking his seat. He took George Washington Custis, one of the Vice Presidents, and the nephew of the first President, by the hand, and said in an audible voice, "The Farmer of Arlington."]

After a good deal more discussion the following resolution was unanimously adopted; viz:—

Resolved, That this Convention respectfully request Congress to take action upon the subject of agriculture, and afford such efficient aid as in their wisdom shall be best calculated to advance the great interests of that branch of industry.

Votes of thanks were then passed to Prof. HENRY for the use of the hall, and to the officers of the Convention; mutual explanations were made and the utmost harmony and brotherhood of feeling were restored.

It was voted to invite a co-operation from all the other kindred societies and institutions of the country.

OFFICERS FOR THE PRESENT YEAR.

PRESIDENT:

MARSHALL P. WILDER, of Massachusetts.

VICE PRESIDENTS:

Ezekiel Holmes..... Maine.
G. W. Nesmith..... New Hampshire.
Henry Stevens..... Vermont.
B. V. French..... Massachusetts.
Josiah Chapin..... Rhode Island.
S. D. Hubbard..... Connecticut.
Henry Wager..... New York.

Thomas Hancock..... New Jersey.
Frederick Watts..... Pennsylvania.
Peter F. Canney..... Delaware.
W. D. Bowie..... Maryland.
G. W. P. Cuthis..... Virginia.
Henry K. Burgwyn..... North Carolina.
John Witherspoon..... South Carolina.
Thomas Stocks..... Georgia.
Richard Jones..... Alabama.
Alexander H. Bequest..... Mississippi.
A. B. Roman..... Louisiana.
Frederick Kensman..... Ohio.
Robert Mallory..... Kentucky.
John Shelby..... Tennessee.
John L. Robinson..... Indiana.
Stephen A. Douglas..... Illinois.
R. Atchison..... Missouri.
T. B. Furnoy..... Arkansas.
James L. Conger..... Michigan.
Simmons Baker..... Florida.
Thomas A. Rusk..... Texas.
W. F. Coolbaugh..... Iowa.
James D. Doty..... Wisconsin.
Killbourn W. Boggs..... California.
J. F. Callan..... District of Columbia.
S. M. Baird..... New Mexico.
Alexander Ramsey..... Minnesota.
Joseph Lane..... Oregon.
Joseph L. Hayes..... Utah.

EXECUTIVE COMMITTEE:

C. B. Calvert..... Maryland.
James A. King..... New York.
Alfred L. Elwin..... Pennsylvania.
W. B. Newton..... Virginia.
J. D. Weston..... Wisconsin.

CORRESPONDING SECRETARY:

Daniel Lee..... Georgia.

RECORDING SECRETARY:

Robert C. Walker..... Pennsylvania.

TREASURER:

William Felde..... Dist. of Columbia.

DELEGATES TO THE AGRICULTURAL CONVENTION.

Maine.—Nathan D. Appleton, Amos Pickard.
New Hampshire.—John H. Steele, G. W. Nesmith.
Vermont.—James Meacham, Henry Stevens, E. Seymour.
Massachusetts.—Marshall P. Wilder, Seth Sprague, Benj. V. French, John W. Proctor, Justus Tower, William Parkhurst, John A. Nash, Benjamin Wheeler, Artemas Lee, John Reynolds, William B. Calhoun, John Davis, Charles Allen, John Brooks, Harvey Dodge, Paul Lathrop, Simon Brown, Zeno Scudder, Benjamin F. Waters, William Sisson, Daniel Kimball, Daniel Adams, George T. Davis, Eliza Mack, E. K. Whitaker, Elijah Perry. Mr. Calhoun, in behalf of the Massachusetts delegation, presented the name of Daniel Webster as a delegate.
Connecticut.—A. Sherman, Isaac Toney, Norman Porter, S. D. Hubbard.
New York.—Henry Wager, B. F. Johnson, L. G. Morris, C. M. Saxton, Dr. A. T. Watson, Ralph Lockwood, J. A. King, William Kelly, J. G. Floyd, Josiah Sutherland, Jedediah Hartford, J. L. Moore, ——— Dickerson.
New Jersey.—Edward N. Dickerson, Thomas Hancock, Reading W. Black.
Pennsylvania.—Frederick Watts, A. L. Elwin, Clayton B. Rogers, G. J. Ball, J. Porter Brawley, P. B. Saveny, A. S. Roberts, James Gowen, Wm. Stavelly, A. E. McIlvaine, W. Jessup, James Mills, Robert C. Walker, George H. Bucher, Luther Kelly, J. W. Howe, A. F. Wilson, Theophilus Henn, J. C. G. Kennedy, Jesse George, Jacob Grundy, David Derickson.
Delaware.—C. P. Holcomb, T. Jenifer Adams, G. P. Fisher.
Maryland.—J. G. Chapman, Charles B. Calvert, Geo. W. Dobbins, Alex. Kilgour, Edward Stabler, David Brumbaugh, Gen. H. S. Stiles, Geo. W. Hughes, J. H. Lockett, Samuel Sands, Wm. Whitelock, J. Merryman, Jr., John Lee, O. Horsey, Geo. S. Hollyday, Ramsey McHenry, ——— Lecompt, Oden Bowie, A. B. Davis, Richard J. Bowie, Augustus Shriver, James B. Grayson, Richard S. Mercer, Glendon Brants, S. A. Cunningham, B. I. Semmes, Wm. G. Bowie, James Mulligen, Thomas Markoe.
Virginia.—John A. Throckmorton, Jas. E. Wharton, Dr. Richard C. Mason, Dr. Thos. Nevitt, Chaahley Gillingham.
North Carolina.—Henry K. Burgwyn.
Georgia.—Dr. D. Lee.
Louisiana.—L. Y. Lusk.
Mississippi.—Jacob Thompson, A. F. Pegues.
Ohio.—Fred. W. Green, Alfred P. Egerton, Norton S. Townsend, W. F. Hunter, John Welch, Lewis D. Campbell, Joseph Cable, John Johnson, John A. Warden, E. Newton, John L. Taylor, D. K. Carter, Hiram Bell, W. Mather.
Kentucky.—Humphrey H. Marshall, Gibson Mallory.
Tennessee.—John Bell, M. F. Gentry.

Indiana.—John L. Robinson, Graham N. Fitch, Willis A. Gorman, Thos. A. Hendricks, Jesse D. Bright, James Lockhart, Samuel Brenton, Samuel W. Parker, John Spencer.
Illinois.—S. A. Douglas, James Shields, Timothy Dudley, Richard Yates.
Michigan.—E. C. Seaman, Charles E. Stuart, James L. Conger.

Texas.—Thos. J. Rusk, James Reilly.

Iowa.—Lincoln Clark.

Wisconsin.—J. D. Doty, J. D. Weston, Chas. Sexton.

District of Columbia.—Jos. H. Bradley, Thos. Bingden, Joshua Pierce, C. L. Fleischman, — Ewhank, B. O. Taylor, Geo. Watterston, J. F. Callan, O. Whittlesey, F. Coyle, De Vere Burr, J. L. Smith, Daniel Saunders, Prof. Henry, D. Clagett, R. Butt, N. P. Causin, J. C. Lewis, Smith Thompson, Chas. J. Stuart, J. L. Carbery, W. Bell, H. Martin, Thos. Fitman, Flodoardo Howard, Allen Dodge, John H. King, John Tyssowski.

☐ The above-named persons were present at the organization of the meeting; many persons came in and presented their credentials afterwards, until nearly every State in the union was represented.

FLOWERS AND FRUIT.

Cannot friends in the country be induced to take more pains to supply the city with flowers? As soon as the wild flowers begin to bloom, and as long as they continue, why cannot children or others gather them, arrange them in small and pretty bunches, and bring or send them to market? What we want are bouquets 3, 6 1-4 and 12 1-2 cents each. It would be more profitable to procure, do them up, and sell them at those rates, than to deal in dandelions, berries, or any of the common country contributions. There need be no fear of overstocking the market. Thousands of persons would gladly avail themselves of such an opportunity of enjoying flowers at an easy rate.

Not only would all the wild flowers command a ready sale; the demand would increase with the supply. Common garden flowers might be added. Many a family in the vicinity would do well by cultivating every variety, and forwarding low priced bouquets to the city. Our great middle class (in respect to pecuniary means) of citizens, who have a taste and love for flowers, are now almost wholly debarred from the possession of them by the limited supply and the consequent exorbitantly high prices demanded. If the whole neighboring country were made a garden, and its sweet, beautiful productions were showered daily upon the city, what a blessing it would be.

Look at the waste land within ten miles of the City Hall; look at the idle hands in an around Boston; and say can nothing be done to bring the two together to the clear advantage of both, and for the benefit of everybody and everything else?

What we have said of flowers is equally true of fruit. Every variety of God's gifts, in the forms so agreeable and refreshing to our appetite and our well being, throughout the summer, might be enjoyed by all classes, as they are now by a few, were the cultivation of them extended, as it should be, and the city favored with a greatly increased supply. We hope a better day is coming in these important particulars. A community abundantly supplied with flowers and fruits, would have a great deal to be thankful for. The steps that may lead to such a consummation are worthy of attention.—*Boston Transcript.*

☐ Porson once boasted that he could write the history of human folly in five hundred volumes. The boast was not unreasonable in his day, but in ours it would make a fool of the man who ventured it.

For the New England Farmer.

FARMING COMPARED WITH MANUFACTURING IN NEW ENGLAND.

BY SILAS BROWN.

MESSRS. EDITORS:—Soon after the revolutionary war very few mechanics could find employment in the country; industrious shoemakers could just supply themselves and families with the necessities of life, and other mechanics could do but little better; but few people understood the meaning of "chartered corporations," bank notes were not in circulation, and specie not far from out of circulation; young men from the army, and others who had served their country at home, were under the necessity of going into business of some kind to supply themselves with "food and raiment," and under the stimulus of hope, and possessing a good share of hereditary enterprise, they worked for small wages a few years, and then purchased lots of wild land in the back towns of New England, New York, and a few, as far off as Ohio; in this way, and by persevering industry, many of them soon became wealthy farmers, and supplied our markets from their abundance with every commodity conducive to comfort and good living.

The success of these enterprising adventurers induced a regular emigration from the worn-out lands of the old settlements, which hindered the increase of population upon the States bordering the sea coast; this drainage, with the evil experienced during the last war with England, in depending upon Europeans to do our manufacturing, being severely felt by the people of New England and some other States, aroused some prominent politicians to a discussion on the importance and advantage to the country of manufacturing our own fabrics from the productions of our own soil, instead of transporting them to Europe, and then back again, subject to a heavy duty, added to the cost of transportation and manufacturing.

The subject of manufacturing was agitated at large in the journals of the day, till chartered corporations were formed, and the business of manufacturing commenced in earnest. Manufacturing in New England was expedited, in consequence of a protective tariff on foreign imported goods, which brought on a stagnation upon the business of the mercantile class of the community, which influenced them to transfer their capital vested in navigation, to the erection of factories, and manufacturing such articles as they had been accustomed to import from foreign lands. It was thought by many people of good reputation for reasoning faculties, that this manufacturing project, would prove ruinous to the business of the laboring classes of the community, especially the females, who were dependent upon spinning, and weaving, for a support. A short time, however, proved a confutation of all those erroneous reasonings, and the laboring classes, instead of being deprived of work, found their labor in greater demand, with an advance of wages which induced almost all the laboring females to forsake home and friends, to engage in the manufacturing business, so that for many years past it has been difficult to procure female labor in a family establishment for double the former amount of wages. Young men of good reputation whom we could hire, before factories went into operation in New England, for ten or twelve dollars a month, will now command some-

thing like double the amount of wages paid then, beside board, at manufacturing.

Formerly, in the months of March and April, daily applications were made by "native Americans," for the privilege of a summer's work on the farm at such a price that the farmer could sustain himself, but now it is as rare an instance to have a young American offer his services on the farm, as it would be to see a politician decline a proffered lucrative office. As soon as the business of farming will promise an income adequate to support overseers at \$2 a day, and laborers at from \$1.00 to \$1.50 a day, and afford a net income of from 6 to 10 per cent. on the capital employed, farming will become very respectable, and there will be no lack of capital vested in the business, nor educated scientific men to become farmers.

The income of most of the farmers in the towns remote from the cities and large villages, in New England, is entirely at variance with the factory prices for labor. Where is the man who lives remote from cities and manufacturing villages, who depends solely upon the income of his farm, that can afford to pay \$2 a day for overseers, and factory wages to laborers, and clear from 6 to 10 per cent. on the value of his farm, stock, and implements of husbandry?

Mr. D., a respectable, industrious and wealthy trader, was very fond of farming; he purchased a farm a little remote from his village, which by his industry and care was the best cultivated farm in the town where it was located; it was generally thought he made it profitable. The farm mania increased upon him, and he bought two more large and excellent farms, appointed overseers, and had them carried on till his stock in trade, his farms and all, were sold to the highest bidder. Thus Mr. D. was reduced from riches to comparative poverty, at farming, under the management of overseers when labor was much cheaper than at present.

Mr. W., a wealthy merchant, bought a good farm, appointed faithful overseers at moderate salaries, and paid strict attention to it himself; he kept accurate accounts of debt and credit, for over twenty years, and the farm fell in debt to him a large sum, I believe over a thousand dollars a year. He expended but little on his farm buildings, as they were better than farm buildings generally average when he purchased the farm; being a rich man he was not at all disconcerted. I could name several other instances within my knowledge, of like results, where farms were owned by able and intelligent gentlemen, engaged in other business at the time, and had their farms managed by overseers.

Here we see the difference between factories conducted by overseers, and farms conducted by overseers. We cannot expect intelligent, enterprising young men, destitute of capital, to prefer the occupation of agriculture, while manufacturing offers inducements of so much greater advantage. If laborers could be hired at European prices, well might the farmers compete with the manufacturers, at the prices they pay for labor, and grow wealthy by the unrequited labor of those whose necessities compelled them to bear the "heat and burden" of the day.

Wilmington, April, 1852.

S. B.

REMARKS.—Our friend has stated two cases

where farms managed by overseers proved failures. We could fill this page with a list of bankrupt manufacturers in New England. We believe that a hundred thousand dollars, or half a million, properly invested in agriculture, and prudently managed, that is, managed with as much shrewdness and intensity of purpose as the large manufacturing establishments are, would yield as much profit through a series of years, and without one-tenth of the risk and vexation, as if it were invested in manufacturing. But farming is often resorted to as the last experiment, without capital or skill, and often without habits of industry. And then, where there is both capital and industry, there is frequently *no skill*, and everything is managed with so little prudence and economy, and so at variance with every true principle of cultivation, that failure is the inevitable result.

The wages of operatives in the mills are varied according to their ability. But it is not always so, or often so, on the farm. Hired men get their ten or twelve dollars a month, when many of them scarcely know a plow from a harrow; and yet under such management complaint is made that farming is unprofitable.

THE GREAT LAND BILL.

The measure known as "Bennett's land bill," (introduced by Mr. Bennett, of the New York delegation,) is one of the most important that has come before Congress, during the present session. It passed the House, a few weeks since, and is now awaiting its fate in the Senate. The bill provides for the distribution of land among the States for educational and other purposes, making the following appropriations:—

States.	Acres.	ed or reserved, lying within her limits, and in addition thereto.
Missouri.....	3,000,000	1,000,000
Alabama.....	2,500,000	
Iowa.....	3,000,000	
Michigan.....	2,500,000	
Wisconsin.....	2,500,000	
Louisiana.....	2,500,000	
Mississippi.....	2,000,000	
Florida.....	2,000,000	
Arkansas.....	2,000,000	
California.....	3,000,000	
Illinois.....	1,000,000	
Vermont.....	750,000	
Massachusetts.....	2,050,000	
Rhode Island.....	600,000	
Connecticut.....	900,000	
New York.....	5,250,000	
New Jersey.....	1,050,000	
Pennsylvania.....	4,050,000	
Delaware.....	450,000	
North Carolina.....	1,500,000	
Indiana—all the public land not sold, located or reserved, lying within her limits, and in addition thereto.		2,000,000
Maine.....		1,300,000
New Hampshire.....		750,000
South Carolina.....		900,000
Georgia.....		1,500,000
Maryland.....		1,200,000
Virginia.....		2,250,000
Kentucky.....		1,800,000
Tennessee.....		1,800,000
New Mexico.....		150,000
Utah.....		150,000
District of Columbia.....		150,000
Total.....		58,350,000

The bill provides that Missouri, Alabama, Michigan, Wisconsin, Louisiana, Mississippi, Florida, Arkansas, California, Illinois and Indiana, shall apply their shares to the construction of railroads, and the remainder of the States and the Territories and the District of Columbia are to expend theirs for the support of schools, or for other useful purposes. It passed the House by a vote of 95

years to 87 nays. The New England members voted as follows:—

Yes.—Messrs. Allen, Appleton, Duncan, Fowler, Mann, Thompson and Scudder of Massachusetts; Goodenow, Reed, Smart and Washburn of Maine; Meacham of Vermont; Perkins of New Hampshire; King and Thurston of Rhode Island; Chapman, Cleveland and Seymour of Connecticut.

Nays.—Messrs. Appleton of Maine; Hibbard of New Hampshire.

LIME AND ITS USE IN AGRICULTURE

Lime is one of the most abundant substances in nature—usually as a carbonate, consisting of 56½ parts of carbonate, and 43½ of carbonic acid, in 100 of the mineral. In burning, the acid escapes in the form of steam. It is then quick-lime. After exposure to the atmosphere, it absorbs water, slacks, and falls into an apparent dry powder; it is then hydrate of lime, and is in the form in which it is generally used for agricultural purposes. It is the most valuable, when used directly after it has fallen into powder. If long exposed to rain and dews before being spread upon the land, it loses a great portion of its fertilizing powers, which principally consist in its action upon vegetable matters, causing them to decompose, and in its neutralizing power upon acids, which abound in some soils.

The Quantity of Lime to the Acre.—In Great Britain from 100 to 400 bushels are applied at once, at intervals of ten, fifteen or nineteen years—the term which leases run. In this country, the most common practice is to apply 30 or 40 bushels once in three years, which is the preferable mode. We have seen it applied with good effect, however, at the rate of 800 bushels to the acre. This was upon a very stiff, cold clay. Three hundred bushels would be about ten tons to the acre. Ten inches depth of soil, would weigh about 1000 tons. That would give one per cent. of lime. A case is reported in England, of soil upon which 120 bushels of lime had been used, being analysed, which apparently contained the same component parts as that along side, which had not been limed for a great number of years. Yet the limed land produced 20 tons of turnips to the acre, while the unlimed portion only produced two tons, tops and all. This was upon red sand-stone land. One of the effects of lime is, it gives the soil power to absorb ammonia from the atmosphere, and retain that which is disengaged by the decomposition of vegetable matter and manure in the soil. Hence the importance of applying lime with green crops, or using coarse manure with the lime.

Indications of want of Lime in the Soil may be seen in heavy crops of straw, and light crops of grain; and in root crops where they seem to run to fingers and seed. Experiments should be made by every farmer with lime, upon various crops in all his fields, to ascertain whether lime would be beneficial to him. Very few places will be found where it will not be so.

To Apply Lime to the Soil, spread it evenly upon a crop of clover about to be plowed under, or sow it upon the surface with the wheat, and harrow thoroughly. It should never be combined with manure, unless the whole is immediately plowed in.

To what Soils is Lime Applicable?—Every clay soil, every peaty soil, and every soil in which vegetable fibre does not readily decay because that is a

sign that it contains some antiseptic acid, which prevents decay. This is the case in peat beds and swamps. Sandy, or thin soils, may be overlimed and injured; because, in causing the decay of vegetables, it sets free the ammonia, the very substance of fertility required. To prevent this, more food must be given for the lime to act upon. No farmer, who knows what the action of lime is, upon all soils, will ever do without it, as an accessory to his manure. It is a component part of all crops grown by the farmer. When applied to land which had not borne wheat for many years, it has at once restored it to fertility for that crop. Where it has failed once to remunerate the farmer using it, it has proved of the greatest benefit a hundred times.

Use of Lime with Peat.—The slow decomposition of peat is an objection to its use. By the term, we mean all swamp muck, partaking more or less of that character. All peat contains resinous matter, which prevents decomposition. By adding lime, the resin is combined and forms soap, and the fibre then decays as rapidly as any other vegetable substance.

Lime in the Soil.—Many farms which once produced good crops of wheat, because there was lime enough in the soil to supply the requisite quantity to the grain, have ceased to be productive. They still produce a large growth of straw, but not a remunerating crop of grain. In some instances, such lands have been restored to their former fertility without applying a bushel of lime. Do you ask how? Simply by plowing deeper. In the harrow, untouched and unexhausted subsoil, there was plenty of lime lying hid, which only wanted stirring up and exposing to the action of the atmosphere, and bringing within reach of the roots of the plants, to produce the same effect originally derived from the top soil before it was exhausted. Our constant advice will be to use lime, plow deep, subsoil and drain stiff lands, increase your crops, and grow rich, which you will do if you read and heed.—*The Plow*.

For the New England Farmer.

SAVING HERDS' GRASS SEED.

There are several reasons why every farmer should make it a general rule to save his own grass seed. Much of the seed of commerce, either from age or injury, is incapable of vegetation, thereby producing great disappointment and deranging the best laid plans of rotation; it often contains foul seeds, such as white daisy and other pestilent plants, that when once introduced it is almost impossible to eradicate. It is much cheaper; and when raised on the farm is generally sown with a more liberal hand than when bought at three or four dollars a bushel, as is occasionally the price.

I have, for several years, practised the following method, and found it to answer my purpose very well, and it may perhaps be of service to some of your readers. I select a suitable piece that is free from every thing but what I wish to save, and as soon as the seed has become hard, take a grain cradle and cut the heads off as near the top as possible, not taking more than from six to twelve inches, and have a man follow and tie it up into good sized bundles, and another follow him with a scythe and mow the bottom close. Three men, with a boy to carry off the bundles and set them

up four in a place leaning against each other, and spread the swarth if it needs it, can secure two acres in a day, both top and bottom. The bundles should stand in the field till most of the top heads become naked, and then carefully secured. After it is thrashed the chaff should be run through fanning mill with the wind regulated so as not to carry off the seed with the chaff, and then, in order to make it perfectly clean, pass it through a suitable sieve—a coarse wire meal sieve will do, if no better is at hand. Newly cleared lands produce the largest crops, but has to be reaped—after that newly seeded old lands; both require to be seeded thin if for seed. I never stock any land expressly for seed, but always sow clover or red top with herds grass and seed heavy and select a piece after the clover has run out.

On such land that will cut from a ton to a ton and a half of hay to the acre I usually get from five to seven bushels of seed; the bottom makes an inferior kind of hay on which colts and young cattle do well in the winter, and the straw is an excellent litter for horses and cattle. One of the greatest objections farmers make to raising herds grass seed is that it runs the grass out immediately, which is in consequence of leaving a high stubble; but by this method the grass will last, I believe, longer than if cut early. It is a well known principle in vegetable physiology that trees and plants are more likely to die when cut off at a certain distance above the ground than when cut close—a close mowed field will start up quicker and last longer than one that is cut high.

Hartford, Vt.

J. L. L.

REVERENCE FOR TREES.

Prof. Park, in his sermon on the life and character of the late Prof. B. B. Edwards, of Andover Theological Seminary, relates a beautiful incident, illustrative of the gentle, genial spirit of that eminent divine. "He bought a half acre of land adjoining his house," says Prof. P., "*principally for the sake of an old oak which grew upon it.* He had long desired to own such a tree—for the oaken wreath is rich with classic associations, and angels of the Lord sat under the oak of old—and many a sermon did he hope to write under its shade." We hope the time is coming, when something of the reverence that is entertained for sacred places, and for works of art, will be cherished towards the trees. Much has been done in many of our towns and villages, within a few years, to remedy the sad error of our fathers, who seem to have supposed that forest trees, like savages, were to be thoroughly extirpated from the soil; but there are yet some barbarians among us, who see nothing in a tree but so many cords of wood. We could point to a certain town in this vicinity—a town, too, whose greatest blemish is a "plentiful lack" of ornamental and shade-trees—where several large and handsome elms, walnuts, oaks, &c., standing in public highways, have been chopped up for firewood, within a short time. It is time this vandal spirit were frowned down, by a purer taste. The Jews of old were forbidden to cut down the fruit

trees even of an enemy, (see Deut. xx., 19, 20,) "for the tree of the field is man's life." There are reasons abundant why the same prohibitory care should be extended among us to ornamental trees, and be sacredly observed by the community generally.

AN HOUR IN A SLAUGHTER-HOUSE.

If any of our readers delight in witnessing the effects of *system* in facilitating labor, let them step into a Cincinnati slaughtering establishment during the killing season.

Aside from the prodigious number of hogs, cattle, sheep and calves disposed of there is an interest in watching the machine-like order of the work. The butcher's yard and building is, of course, not a very neat place, while the blood and offal of two thousand hogs a day pass through them. The slaughter-house is situated in some retired hollow, with a small stream passing beneath it, and is generally a cheap, temporary building.

The hogs of each drove are kept in a separate pen till the hour of execution, when a devoted few, say thirty or forty, are compelled, much against their will, to march up a platform within the building. Here, a man with an iron sledge goes among them, and strikes them on the head with a dull, sickening sound, and they fall without a squeal. While in a senseless state, they are thrown upon a grating near the scalding vats, where they are stuck, and the blood flows into the stream below.

The vats are wide enough to place a hog crosswise, and long enough to hold ten or twelve at a time; and there are, in large establishments, two vats, on each side of which are five or six men, making twenty in all. The water is kept hot by steam, and the carcasses are constantly kept turning and stirring as they pass along, so that when they reach the farther end of the vat, they are stripped of the hair, and are hauled out and hung up by the heels for gutting.

The man who strikes them puts a mark on the leg of each, to show who is the owner. A hog is pushed from the grating, all quivering and bloody, into the scalding water, about once in half a minute, and a clean carcass is hauled out of the other end of the vat as frequently, and also another taken from the gambrel and carried to the hooks as often, where he hangs till the next morning, to cool. For two vats, about 50 men are required.

The next morning, a four or six horse team appears at the slaughter-house, bright and early, and piling the stiff carcasses into a huge rack, conveys them to the packers. The *butcher*, instead of being paid for his expense, pays the *drover* something—eight, ten, or twelve cents a head—for the chance; and all the offal belongs to him, including everything taken from the animal.

At the packer's, which is in a more public part of the city, the hog is weighed, and the two men place his body on a bench. On each side of the bench stand two strong men, with huge cleavers, more dreadful than an executioner's axe, on which they put a keen edge between each blow. One blow given simultaneously by each, severs the head, and also the hind quarters, from the trunk. These are thrown in different directions, to be trimmed and cured.

One of the cutters turns the trunk on its back, and holds it open, while the other splits it along

the back-bone. Each one takes half, and the leaf lard being torn out, cuts off the shoulders, and at four strokes the sides are cut into the proper form. The hog disappears in different directions, and in about half a minute from the time he was put up on the bench, another takes his place to undergo the same process. The pieces destined for mess pork, are salted into a barrel, headed up, filled with brine, rolled into the street, put on a dray, carried to the river, and the hog may be on his way to New Orleans, as pork, within twenty-four hours after he crossed the ferry from Kentucky. Much might be said of the mode of curing, particularly of the celebrated sugar-cured hams; but at present we must omit these details.—*Western Agriculturist*.

For the New England Farmer.

OXYGEN.

BY J. B. M'MAHON, M. D.

As oxygen, in combination with heat, is found to compose the portion of atmospheric air so necessary for animal and vegetable respiration, a due consideration of its necessity and importance to the productions of the earth highly becomes the expert and scientific farmer. It is asserted by the most experienced chemists that oxygen gas or vital air constitutes twenty-seven-hundredth parts of our atmosphere; it forms the principal parts of all acids, hence, the term is derived from the Greek words—*oxus*, which signifies sharp, and *gennao*, to beget. None of the bases which combine with oxygen are alone soluble in water; they cannot consequently be received by the absorbent vessels of plants or roots, until they become acids, when they become part of the food and nourishment of plants. Oxygen and carbon are found quickly to unite by a decomposition of vegetable substances, and this carbonic gas, in its fluid state only, and not in its gaseous state, becomes the food of plants, because their fibres consist principally of carbon and their fluids of water.

Dr. Darwin, the author of the *Zoonomia*, asserts that, next to carbonic acid, the aqueous acid, if it may be so called, or water, seems to afford the principal food of vegetables; as water consists of oxygen and hydrogen, it is properly an acid, like all other combinations of oxygen; and when absorbed by vegetable roots, becomes in part decomposed in the circulation or secretion of their juices; the oxygen disappears, or contributes to form the vegetable acids; and the hydrogen produces ammonia by its union with azote; which may contribute to vegetable nutriment by its mixture with oils, and thus producing saps, which become diffusible in water; and also by decomposing insoluble saline earths, as gypsum, or metallic salts, as vitriol of iron; and which forms a part of the various productions of sugar, honey, wax, resin, and various other secretions.

After thus attentively considering the power and influence of atmospheric air on vegetation, the nature of different soils respecting their constituent parts, the latent fire contained in all created matter in a greater or less degree, which the ancients called the *animamundi*, our moderns call it caloric, or a principle of electricity, but, which I take to be the celestial *medium*, by which, at the creation of matter, all its parts were impregnated by omnific power, and consequently became the elastic basis of matter; I said after having consid-

ered these first principles, the most proper mode of ameliorating the respective soils should next, in my opinion, claim all the research and ingenuity of the industrious farmer. The Chinese, the Egyptians and Romans, found means of purifying certain soils by burning, as will be seen by the following:

"Long practice has a sure improvement found,
With kindled fires to burn the barren ground
When the light stubble, to the flames resigned,
Is driven along, and crackles in the wind
Whether from hence the hollow womb of earth
Is warmed with sacred strength for better birth;
Or, when the latent vice is cured by fire,
Redundant humors through the pores expire.
Or that the warmth distends the chinks, and makes
New breathings, whence new nourishment she takes;
Or that the heat the gaping ground constrains,
New knits the surface and new strings the veins,
Least soaking showers should pierce her sacred seat,
Or freezing Boreas chill her genial heat,
Or scorching suns too violently beat."

Druden, Virg. Geor. 1st.

Granting that modern agriculturists hold different opinions respecting the general good effects from burning, this diversity in their opinions may arise from a want of system or order in their respective mode of management, because its good effects are pretty generally acknowledged. When argillaceous earths are burned, they become of a sandy nature, and that brick, when only moderately heated, sticks to the tongue, which effect it will not have when perfectly burned. The reason of the first effect is from the humidity which it absorbed, but which in the latter case it no longer possessed.

Felspar contains calcareous earth, silicious and aluminous earths, together with a fixed alkali and the oxyde of iron. If reduced to an impalpable powder, it will resemble the argyle, and being strongly heated, will melt; if only moderately heated it forms a kind of paste, which, when broken, resembles sand. The conclusion to be drawn from the above effects is, that by burning, the soil is rendered less compact, less tenacious and less adapted to absorb the water and humidity of the atmosphere; consequently, low, humid and swampy soils, in order to give them a tone and susceptibility for vegetation, should be heated and thus pulverized. The above reasons seem to me conclusive against the objections of those who maintain that, together with destroying the vegetable and animal matter, the fire, in other respects, also serves to impoverish the soil. With these I perfectly agree in the abstract, and that is, if not properly and scientifically applied to such soil as requires that mode of treatment as the best and easiest mode for its amelioration. Hence can be justly appreciated the extensive use of chemical deductions in the wide field of agriculture. In truth it is the broad and solid basis on which it is naturally founded. But if the conclusions carried out in any science, be found to vary in any material point from the *data* or its first principles, there will appear, either something defective in the system itself, or a criminal deviation from its assumed and established principles. So in agriculture, the amelioration of the different soils must be systematically followed up, according to their elementary constituents or component parts, as above specified in one or two instances.

We have only to look on two adjoining farms (admitting no disparity of soil;) one we see to produce abundant crops, and amply to recompense the labor and toil of the farmer, while that of his less

fortunate neighbor shews all the marks of sterility. He may labor with equal if not more assiduity, but the question is, does he labor scientifically? Because to labor advantageously, he should study to attain the science peculiar to his pursuits. The good effects derived from irrigating certain soils depend chiefly on chemical and mechanical causes. Water to produce vegetation is essentially requisite. Land which during winter and spring has the necessary supply of water, acquires a nourishment which it produces during the summer, and becomes highly necessary during the summer heat for vegetation. If the water flow over calcareous earth, it will be found of incalculable service. So will river water, as containing a great quantity of organized matter, if the river flow through a cultivated country. Fallows are considered generally of the greatest importance to the farmer for many reasons; they mollify the ground, they deprive it of excessive humidity and open it for the action of atmospheric air, they purify it from weeds and much redundant matter, particularly when it is not of a nature to admit the action of fire. Many, against this excellent practice of making fallow ground, are wont to give some lame or unreasonable excuse, all which have a greater tendency to protect idleness than to stimulate industry. I am ready to admit that it is not every kind of soil which receives benefit, by being turned up in the autumn; this, to all farmers, is already well known. Here the farmer must be left to his own discretion and experience. The earth which we find in the soil, if I may so express it, of some fallow ground, does not combine with oxygen or azote, but that which unites with carbonic acid is found in abundance. Nitrous salt is copiously produced, by thus exposing vegetable and animal matter to the action of the atmosphere; the azote, thus absorbed, forms ammonia, which is useful for vegetation. Notwithstanding some other objections to the making of fallow ground, it must be admitted that the action of the sun on its surface will not be without a good effect. When the ground is not employed by producing nourishment for cattle, it should be employed otherwise, advantageously, so as to become a nourishment or manure for itself. This can be done by many artificial means; such as artificial meadows, as in England, Scotland, and many other countries. The inhabitants of Sweden pay more attention to the irrigation and manuring of their lands, than any other people mentioned in the history of Europe. France is far behind England in point of agriculture, but the industrious Swede, in this science, has no competitor. Agriculture, in Sweden, is not only patronized by the government, but also receives every possible encouragement; notwithstanding their long winter, which is full nine months, it is really astonishing to find how rapidly they advanced since the year 1840. They were tributary, at one time, to Poland, whence they received their wheat provisions. They now export in grain more than half what they consume. The peasant is no longer obliged to mix the powdered barks of trees with his flour to make bread. The report of what they sow to the produce of wheat, is from one to eight, and variously from one to six. That of potatoes is from one to eleven. They have appropriate agricultural schools in Stockholm, the capital, and in different parts of the provinces. Their system, in time of peace, is to transfer the soldier into a cultivator.

Each soldier has a house, stable and barn, and five acres of land to cultivate. Thus in the space of a few years the Swedish government, and individuals of every rank, by a noble emulation, in all departments of agricultural pursuits have rendered themselves independent of their neighbors and given to the world an example of industry well worthy of imitation. The earth is man's domain, but without agriculture it would remain sterile. 'Tis the first science according to this world, and the science of the first man. It is the nourishing mother of all industry. By it man turns to his own profit the soil and all its various productions, with its minerals and metals, and all the animals which live on its surface. If by medicine man may be succored in his infirmities, is it not to agriculture that medicine owes her most energetic and efficacious remedies! That all riches come from the earth, is an old and solid axiom; wishing, therefore, that it may be abundantly realized by the industrious farmer, I remain his sincere friend,
Boston, June 20, 1852. J. B. M.

TIME OF CUTTING GRAIN.

As we have often stated, all grain should be cut before it becomes full or dead ripe—when the stem becomes yellow or arid four or five inches below the head, it should be cut; for from that period the grain receives no benefit, as the sap cannot circulate beyond the arid line. It may be set down as a safe rule—CUT FROM 7 TO 10 DAYS BEFORE THE GRAIN IS DEAD RIFE. If cut at this period, there will be but comparatively little loss from shattering; the grain will be more in quantity, better in quality, and make better flour, and what is not less important, save it from rust, while the straw will be greatly enhanced in quality as stock-provender.

Upon the subject of early cutting, we will copy two extracts which we gave in our July number of last year, in order that our new subscribers may have the benefit of them.

M. Cadet de Vaux, of France, has recommended as an important innovation the reaping of corn [small grain] before it is perfectly ripe. This practice originated with *M. Salles* of the Agricultural Society of *Besiers*; grain thus reaped (say eight days before it is ripe) is fuller, larger and finer, and is never attacked by the weevil. This was proved by reaping one-half of a piece of corn-field, [wheat] as recommended, and leaving the other till the usual time. The early reaped portion gave a hectolitre (about 3 bushels) of corn [wheat] more for an acre of land than the later reaped. An equal quantity of flour from each was made into bread; that made from the corn [wheat] reaped green gave 7 lbs. of bread more than the other in 2 bushels. The weevil attacked the ripe, but not the green. The proper time for reaping, is when the grain pressed between the fingers has a doughy appearance, like bread just fresh from the oven when pressed in the same way.

Upon the same subject, *Mr. John C. Reid*, of *Laporte, Indiana*, gives the following as his experience:—

"The first when cut was in dough, the last very ripe. The first cut weighed 65 lbs. per bushel; the last 60 to 63 lbs. The first made the finest flour, and the greatest quantity to the bushel."—*American Farmer*.

THE VIRGINIA REAPER.

While at Washington, recently, to attend the Agricultural Convention, in company with Mr. RAYNOLDS, one of the proprietors of this paper, and a large company of other gentlemen from various parts of the country, we spent an afternoon in the examination of *McCormick's Patent Reaper*, the instrument that gained a world-wide celebrity at the World's Fair at London last year. Crossing the eastern branch of the Potomac, near the Navy Yard, we found on the opposite side at Giesborough a field of from sixty to seventy acres, covered with a fine crop of wheat which would average as we should judge fifteen or sixteen bushels to the acre. Three fine mules were hitched to the Reaper, and in exhibiting through the day, and on previous days, some forty acres had been cut. The field presented a clean and workmanlike appearance, the scatterings being rather more liberal, perhaps, than when grain is cradled. The machine requires a driver and a person to rake the grain from the platform in parcels of a size proper for binding, both of whom ride. Fifteen acres a day is considered a fair average on favorable ground—several acres more may be cut with a little pressure—but that number of acres may be handsomely cut from day to day. The grain is raked from the platform of the machine with the heads all one way, and in parcels quite as convenient for binding as when cradled.

The operation of the Reaper seemed to be satisfactory to the numerous gentlemen who witnessed it, many of whom were large planters, and of course much interested in a machine that has promised to do so much in the grain harvests of the south.

We considered the exhibition a successful one.

For the New England Farmer.

NO PROFIT IN FARMING.

How often do we hear the complaint made, by persons in possession of small farms, that there is no profit in farming, and those possessed of large ones, not unfrequently, offer the same plea, viz., that it costs all to live. With pride they refer to the good old times of our grandsires, when, they imagine, farming was more profitable than now; and not a few are willing to lay the charge to the administration of our government, for all this supposed degeneracy in the occupation of the farmers, and consequently turn politicians, for the time being, in hopes to overturn the present administration, install another in its stead, for the purpose of bringing round the aforesaid imaginary good old times.

But, how can it be proved that farming was ever better than at the present time? Was there ever five years in succession when the farmer could dispose of his butter, cheese, meats and potatoes, and finally the general products of his farm, for more ready cash than for the past five years? or was there ever a time when he could purchase the necessities of life cheaper than during the same

period, aside from the tedious horse-back journey of former times, compared with the facilities of railroad communication? Certainly I believe the answer should be no.

The fault, then, is not in the administration of the government, nor in the high prices of the necessities of life, or in the low prices of the farm produce. Then we must look elsewhere for the evil which I believe lies at the farmer's door, or at least, in the customs and fashions of the times.

What a contrast presents itself to our view, when we compare the nicely finished buildings of the present with the humble dwellings of our grandfathers; this is all very well, but the farmer should remember they cost money. The necessities of life (if we may so term it) have multiplied almost to infinitude; instead of subsisting upon the products of our own soil, we tickle our palates with those of nearly every clime; this will do if it does not interfere with the constitution, (as the politicians say,) and the farmer can afford it, but remember it costs money. It was very different with Sir Balaam, of whom the poet speaks,—

"One simple dish his week-day meals affords,
An added pudding solemnized the Lord's."

Fashion has done much to drain the profits of the farmer—the homespun cotton and woolen dresses of our ancestors have given place to the variegated webs of Thibet and Hindoostan; the farmer's daughters must dress and shine in all the variety of the bride of a millionaire; they must attend dancing schools and cotillions, which the more frequent, require the more frequent changes in apparel; changes which have become as important as changes in the moon. His sons, too, if willing to assist in filling his granary with the products of the soil, are frequently equally willing to relieve him of the contents of his pocket.

Let farmers, then, view the subject of their own occupation in its true light, nor look abroad for the cause of evils when it may be found at home.

If the farmer manages his business well, his income is very considerable, but his expenses may exceed it; could he adopt the strict economy of our early settlers with his present income, I believe we should very seldom hear the complaint of *no profit in farming*.

H. FOWLER.

Stowe, July, 1852.

REMARKS.—Yes; these are all true reasons, and there are plenty of others which we hope our correspondent will allude to hereafter.

THE PEEL OR RIND OF FRUIT INDIGESTIBLE.

This fact cannot be too strongly impressed upon the public. It applies to all fruit without exception, and includes also the pellicle or skin of kernels and nuts of all kinds. The edible part of fruit is particularly delicate, and liable to rapid decomposition if exposed to the atmosphere; it is, therefore, a provision of nature to place a strong and impervious coating over it, as a protection against accident, and to prevent insect enemies from destroying the seed within. The skin of all the plum tribe is wonderfully strong compared with its substance, and resists the action of water and many solvents in a remarkable manner. If not thoroughly masticated before taken into the stomach, the rind of plums is rarely, if ever, dissolved by the

gastric juice. In some cases, pieces of it adhere to the coats of the stomach, the same as wet paper clings to bodies, causing sickness and other inconvenience. Dried rasins and currants are particularly included in these remarks, shewing the best reasons for placing the fruit upon the chopping board with the suet in making a pudding of them, for if a dried currant passes into the stomach whole, it is never digested at all. When horses eat oats or beans that have not been through a crushing mill, much of this food is swallowed whole, and in this state, being perfectly indigestible, the husk or pellicle resisting the solvents of the stomach, there is so much lost to nutrition. Birds, being destitute of teeth, are provided with the apparatus for grinding their seed, namely, the gizzard through which the seed passes, and is crushed prior to digestion. The peels of apples and pears should always be cast away. Oranges we need not mention, as this is always done. Orleans, greengages, damsons, and all plums, should be carefully skinned, if eaten raw; and if put into tarts, they should be crushed before cooking. Nuts are as indigestible as we could desire, if the brown skin be not removed or blanched, as almonds are generally treated.—*Er.*

THE CAPITOL--WASHINGTON.

Every good citizen, native or adopted, must feel an interest in his country, whether it be in her future glory and the perpetuity of her institutions, or in the impression which she makes, and is to make, on the mind of the foreigner who visits us, or on the world, who only know us by representatives from our shores, or by common report; that interest we feel, sensibly. That what our country is to be, depends somewhat on us, as it does upon every good citizen. We feel that a portion of the public domain is ours—paid for by the blood of our ancestors and by the toil and sweat of our own brow, and, like our fireside and the loved ones around it, is as dear to us as the best blessing which Heaven has vouchsafed to send. We boast no peculiar patriotism—the feeling is as common as the air we breathe; it inspires millions of hearts at this moment with the true principles of liberty, and with as much heroic daring as was manifested by the noble souls of the revolution. We believe in a progress every way that will elevate the condition of man; in wisdom to keep himself out of war, and in unflinching resolution to pursue it when compelled to fight for his freedom and all that he holds dear.

But we have wandered from the subject—it was *Uncle Sam's Farm* that we meant to speak of, and not his battle-fields. The latter will be defended better, we fear, than the former will be cultivated and improved.

In a ten years' residence at the Capitol of the Union we could not help gathering something of the feeling of those who came there to represent States, in relation to that portion of territory set apart as neutral ground for the transaction of the business of the nation. With a jealous eye to the

unbiased action of the representative, the citizens of that territory are disfranchised, having a vote only in their municipal affairs. But with this restriction, there are those who think that money is expended too lavishly at this central point, and that its citizens reap too freely of the people's contributions.

The population in the city of Washington has nearly or quite doubled in the last ten years. The public buildings, projected at first on a scale of cost and magnificence before unknown in this country, have been continued with liberality, and with a high sense of the dignity and importance of the nation. Some of the buildings are still in an unfinished state; but as more room is needed by the government, the original designs are carried out. The Treasury building, with the longest colonnade in the world, is still unfinished; the Patent Office, the centre of which is constructed of sandstone, is now receiving an addition of two wings of white marble, which, when completed, will make a structure scarcely surpassed by any of the buildings in the Old World. The General Post Office is a large and beautiful edifice, constructed also of white marble.

The capitol was commenced in 1793. Including the circular terrace, it covers upwards of two acres of ground, and has cost *two millions of dollars*. The length of the front is three hundred and fifty-two feet, depth of its wings one hundred and twenty-one feet, east projection and steps sixty-five feet, and west projection and steps eighty-three feet. The building is decorated in several parts by fine statuary and paintings. On the west front is a monument commemorative of the awful catastrophe in the harbor of Tripoli in September, 1804, when the *Ketch Intrepid* was blown up with her officers and crew of thirteen as gallant souls as ever trod the deck of a ship. The column, ornamented with the prows of Turkish vessels, rests on a base, on one side of which is sculptured a view of Tripoli and its fortresses in the distance, the Mediterranean and the American fleet in the foreground. On each of the other sides of the base are inscriptions, one containing the names of the officers who so heroically sacrificed their lives on the occasion, and the other the epitaph, &c. There are also, other appropriate and spirited figures. On each side of the east entrance there is a colossal figure in marble representing *WAR* and *PEACE*. The rotunda occupies the centre of the Capitol. It is ninety-six feet in diameter, and ninety-six feet high to the ceiling of the dome. This is terminated by a cupola and balustrade, accessible by means of a staircase passing between the roof and ceiling. From this elevation the prospect which bursts upon the eye is most splendid. Three cities are spread before you; the Potomac on one side and the Eastern Branch on the other, uniting and rolling their waters to the ocean; a range of

mills extending in a magnificent sweep, and displaying all the richness and verdure of woodland scenery.

The interior of the Rotunda is ornamented with *alto relievos* sculptured in stone panels and with historical paintings. The subjects of the sculptured panels are, 1st, The preservation of Captain Smith by Pocahontas; 2d, The landing of the Pilgrims at Plymouth; 3d, The conflict between Daniel Boone and the Indians; and 4th, Penn's Treaty with the Indians.

The paintings, by TRUMBULL, which fill the large panels, are, 1st, The Declaration of Independence; 2d, Surrender of Burgoyne; 3d, Surrender of the British Army, commanded by Lord Cornwallis, at Yorktown, in Virginia, October 19, 1781; and 4th, The Resignation of General Washington at Annapolis, Dec. 23, 1783.

Another panel has been filled by an exquisite painting of the Embarkation of the Pilgrims, and another no less beautiful of the Baptism of Pocahontas. As will be seen, these paintings represent the most intensely interesting historical scenes, and the eye of the visitor is riveted to them as by a charm. They are worthy the study of days, instead of the hurried moments usually devoted to them, and the visitor, wearied with the ascent to the dome and the inspection of the various halls and rooms, turns again to these pictures to refresh his mind with a last look and fix them upon his memory.

The Hall of Representatives is a magnificent apartment, in the form of an ancient Grecian theatre; is ninety-five feet in length, and sixty in height. Twenty-six massive columns and pilasters of Potomac marble, the capitals of which are of Italian marble, executed in Italy, support a magnificent dome. The Senate Chamber is semi-circular in its form, 75 feet in length, and 45 feet high. The Library, (which is now a mass of ruins,) the Supreme Court Room, Speaker's Room, and the Room of the President of the Senate, are all in a style suitable to the parts we have mentioned.

The government is now adding two new wings to this already imposing and magnificent structure, and it was of this, and the grounds about the building, that we intended to speak when we began this article. These wings will occupy the whole space between the present building and the streets upon which the grounds abut, so that when completed, the windows of the Senate Chamber on one side, and those of the House of Representatives on the other, will look directly down upon the street where the carriages and teams are constantly passing, and where noise and confusion would constantly interrupt the business of the session. They must have more room. The present grounds about the Capitol comprise thirty acres. These are laid out with taste, ornamented with pools and jets, and filled with most of the trees

common to our climate, and the whole surrounded with a substantial iron fence upon a stone basement.

There is no longer need of parsimony in the construction of our public buildings or in the embellishment of their grounds. They should be constructed and ornamented in a style and spirit corresponding with the magnitude and ability of the nation. The Capitol of these States should represent, in some degree, their extent and power. In order to accomplish this, the government should at once purchase and add to the public grounds about the Capitol, fifty or one hundred acres, taking in the squares on the north and south of the Capitol and extending down East Capitol Street one or two squares. This should be DONE NOW as a MATTER of ECONOMY. It will be done at some time, and if delayed the expense will be enormous, if the purchase is postponed until the squares are filled with buildings, and become highly improved.

We make these suggestions hoping that others will roll on the ball, believing that in noticing this portion of Uncle Sam's homestead we have not travelled out of our legitimate sphere.

For the New England Farmer.

THE JOINT WORM.

BY PROF. T. W. HARRIS.

SIMON BROWN, Esq.:—Dear Sir,—It would give me much pleasure, in complying with your request, to be able to point out any effectual remedy for the damage done to the growing wheat of the Southern States by the joint worm. F. G. Ruffin, Esq., the editor of the *Southern Planter*, informs me that the ravages of this insect "have been more aggravated this spring than ever before, ruining many wheat crops utterly, and curtailing others to at least one-third of an average crop." My means for studying the history of this insect have hitherto been very small, having been limited to the specimens of diseased wheat straw sent to me by Mr. Ruffin last March. I was not aware of the existence of the insect at the South, and of its ravages, before accidentally reading the *Albany Cultivator* for October, 1851, containing an article upon it by Dr. Asa Fitch, of Salem, N. Y. This article led me to suspect that the insect might be the same as that which attacks barley straw in New England, a suspicion that has been fully verified both by myself and Dr. Fitch. But the history of the barley insect is confessedly imperfect, no opportunity for completing it having occurred to me since the publication of my first account of it, on the 23d of July, 1830, in the old and excellent *New England Farmer*.

A large portion of the diseased wheat straw, sent to me by Mr. Ruffin, was transmitted to Dr. Fitch, in the hope that, between us, something definite concerning the origin of the injury might be obtained. Both of us, however, have come to the same result, which does not, as yet, extend the bounds of our knowledge. About the first of May, insects began to come forth from the diseased straw, and continued to issue during ten days or a fortnight. Their appearance was probably accelerated by the straw being kept in a

glass jar in the house, instead of being exposed to the open air abroad. All of the insects except two were identical with specimens obtained from diseased barley straw in the spring of 1830, and all of them were females. To the barley straw insect I gave the name of *Eurytoma hordei*; and the same name must be applied to the insects obtained from the diseased wheat straw. They belong to the Chalcidian family, consisting of various kinds and species of small Ichneumon flies, all of which, so far as their habits have been observed, are parasitical, or live in their grub state within the bodies of other insects. Two of the wheat straw insects were smaller specimens, belonging to the same family, but to the genus *Pteromalus*. Not one species in this family has ever been known, hitherto, to differ in habits from the rest; hence all of them are supposed to be parasitical. Reasoning from analogy, therefore, when the *Eurytoma hordei* was first obtained from the barley straw, I inferred that it was a parasitical species, and that the maggot in the straw from which it is developed was the young or larva of an unknown species of *Cecidomyia*, the real cause of the injury to the straw. The Hessian fly and wheat fly are species of *Cecidomyia*, and both of them, in the maggot state, are preyed upon by Chalcidian parasites, which are transformed to tiny four-winged flies. These, being often seen in great numbers in the wheat fields, where the maggots of the Hessian and wheat fly have carried on their ravages, have been frequently mistaken for the parents of the real culprits. What has hertofore happened may happen again; and, as no person, so far as I can learn, has yet succeeded in raising any species of *Cecidomyia* from the diseased barley straw, or from the joint-worm of the southern wheat, the *Eurytoma* is likely to be charged with being the cause of the mischief done to the stems of these plants. It remains to be seen, from full and careful observations, made on the wheat and barley at various times, whether such charge can be sustained. I am indifferent to the result, if only the truth can be arrived at and made known; hoping that thereby some means for arresting the ravages of the insect, whatever the latter may be, may soon be discovered.

Mr. Ruffin has already been referred to my account of *Eurytoma hordei* in the *New England Farmer*, and in my work on insects injurious to vegetation, which may be consulted by others, also, who are interested in the subject. To this account, I have only to add another fact and a single suggestion.

It is well known that barley straw is occasionally made use of, in New England, for summer beds. Children and other persons, sleeping upon these beds in May and June, sometimes suffer from irritating bites or stings, which are found to be made by swarms of the *Eurytoma* issuing from the straw, and coming through the ticking. A case of this kind fell under my own observation a few years ago. To remedy this inconvenience, straw should not be used for beds until it is more than one year old, by which time all the insects will have escaped from it.

Dr. Fitch seems to think that the joint worm, which he examined, was a genuine larva of a *Cecidomyia*, a circumstance which coincides with my own impressions concerning the maggot in the barley straw. Part of the brood of joint worms, or

maggots of the wheat and barley straw may escape being attacked by the *Eurytoma*, and may complete their transformations during the first summer, at which time they do not seem to have come under the notice of naturalists; while another portion of the brood, falling a prey to the *Eurytoma*, may perish without change, or give issue only, at a later period, to swarms of the parasitical flies that alone have been hitherto seen.

Cambridge, July 10, 1852.

T. W. H.

For the New England Farmer.

VERMIN ON HOGS.

MR. EDITOR:—Sir,—I do not remember to have seen in any papers of our country an account of lice on hogs; therefore I wish you to inform me through this paper what will effect a cure. I have tried various methods, but nothing seems to do any good. I would inquire whether any remedy has been discovered to your knowledge that has proved effectual?

A SUBSCRIBER.

Braggville, July 5, 1852.

REMARKS.—Good keeping, a wet place to wallow in when they see fit, and a dry, clean bed always to go to when they please. These are indispensable. Then, as all creatures have their parasites, or lice, we must do something else. Scatter, occasionally, a small quantity of ashes or unslacked lime in their sleeping apartment. Take the suds of the wash and pour over them once or twice a month, following it up by scratching them with a piece of sheet iron four inches wide and five inches long, notched like saw teeth on the sides with blunt teeth, and nailed to the end of a handle of convenient length. Rub them with buttermilk, or grease occasionally, and if some one or all these do not prevent the vermin from troubling your swine, then they are models of perseverance, and ought to have a fair chance for a living with the rest of us!

All these operations are good for the animal if he has no vermin, so that nothing is lost, whether they are exterminated or not.

While speaking of swine, we will mention a matter too commonly overlooked by the farmer; and that is neglecting to give them, daily, a feed of short, succulent, tender grass. We have known a number of swine, in pens, nearly supported through the summer by giving them the grass from a lawn, which was kept clean and mowed once in six or eight days; they were not only supported, but gained well. They like the weeds from the garden, and will make them take the place of much meal if they can but get at them.

CLOVER SEEDS IN ONE CUBIC INCH.—A correspondent says the number of clover seeds contained in one cubic inch, is 9,053. In that ratio, one bushel contains 19,466,571 seeds. Allowing a man to count one hundred per minute, and to work ten hours per day, it would require 324 days, 4 hours, 35 minutes, and 42 3-5 seconds, to enumerate them.

HOVEY'S SEEDLING STRAWBERRY.

THE STRAWBERRY.

Strawberry plants may be set in the spring or in the month of August, and will do well set at either time if properly cultivated. The land should be prepared by liberal manuring with any of the common kinds of manure, deep plowing and thorough pulverization. They should be set fifteen to twenty inches apart each way, according to the quality of the land, and so as to leave room to work among them.

In his fruit book, Mr. Cole advises "the first season to keep the land well cultivated, and free from weeds, stirring the soil often. The next spring thin the plants when too thick, destroy all weeds, and stir the soil, but not after the plants blossom. After hoeing, and before the plants have grown much, spread among them straw, saw-dust, sea-weed, or leaves, to keep the berries free from grit and the land loose and moist. This will decay and form manure." In rich and rather moist land, where the soil is deep and the surface kept loose and free from weeds, a good crop of strawberries may be expected with as much confidence as a crop of beans or peas.

There are many varieties, but only two or three much in use. The variety represented at the head of this article is extremely large, the flesh firm, with a rich sprightly flavor, and producing fruit from the twentieth of June into July. It is a great bearer, hardy and vigorous, and easy to pick. The Early Virginia is usually cultivated with Hovey's

Seedling. It is rather large, very juicy, and of excellent flavor. Mr. Cole thought it the best early strawberry known in this section. Then there is the Boston Pine, the Duke of Kent, the Wood, the Black Prince, Jenney's Seedling, and many others, but most of them hardly worth experimenting on.

For the New England Farmer.

WHAT KILLS THE BUDS AND TREES?

MR. EDITOR:—I have been interested in the above inquiry by your associate, and also in an article of your own, in the last number of the *Farmer*, relative to "the effects of the late severe winter upon vegetation." If very strongly opposed to agitation, I should come out against the farther discussion of this subject *in toto*. It is no great favor to be continually reminding one of his buds that wont blow, and of his trees dead past all recovery. After we have got some of the finest of our trees fairly packed away at the bottom of the brush-pile, can there be any particular use in so often touching up one's recollection by inquiring "what killed um?" But the subjects are now disinterred, and we may as well see that they are fairly dissected.

After a careful examination of my own trees, as well as taking some pains to learn the experience and conclusions of others, I have come to be pretty well satisfied that the results under consideration are mainly attributable to long protracted severe cold. The following are some of the reasons that have led me to adopt this opinion.

The buds and trees never fail after a mild winter, unaccompanied by severe cold of considerable

duration. This would not be the case if the injury was caused by frosts in autumn and spring, or by excessive evaporation. I have been told by an intelligent, and, for this latitude, extensive cultivator of the peach, that his buds have never been injured in autumn or spring. On the other hand he always finds the evidence of a failure abundant after severe and protracted cold.

In my own nursery the peach buds on the low branches that have been buried in the snow—and in that way protected from a lower temperature, have always expanded. This, to my mind, is conclusive, that the temperature of snow is not injurious to peach buds. It also shows that the injury, whatever its cause, must be attributed to some agent operating subsequent to the frosts of autumn, and before the disappearance of snow in spring,—otherwise the whole tree would be similarly affected. One other fact in point is, that in no instance of injury to my trees have the roots been killed, except in situations unprotected by the snow. The trunks have invariably thrown out strong shoots as high as the surface of the previous winter's snow. But where the snow has been blown off, the long protracted cold has found its way to the roots, and produced the same effect that is so often produced on the branches.

The question now comes up, why are trees on our sandy plains oftener injured than others? My answer to this question is, that they are more susceptible of the influence of cold, owing to the immature condition of the fruit-bearing portion of the trees when overtaken by the winter. In addition to this it should be borne in mind that the cold is more intense in such locations. An elevation of ten feet is said, by some who have tried this experiment, to be equal to a degree of Fahrenheit. If any one wishes to put the question, by way of cross-examination, why the new growth of trees, thus situated, is less perfect, the answer is that these trees are subject to the influence of early frosts, to which such land is liable, the growth thereby becoming suddenly checked, and the ripening of the wood prevented. On harder and more elevated soil, the growth is usually less, and more perfect; the frosts are more tardy in their appearance, and the cold of winter not so intense.

It is well known that the peach produces its fruit on the previous year's growth; and hence any injury to this must, of course, be fatal to the succeeding crops. Buds are killed, many times, where trees are not perceptibly affected. One reason doubtless is, that they are more tender, and also that they are of such a form, and so situated on the twig, as to leave them exposed on every side. For this reason they are affected by a low temperature of comparatively short duration.

It is often suggested, by writers on this subject, that trees which are frozen are not injuriously affected by any greater degree of cold. Such writers seem to take it for granted that all the evil arises from the expansive nature of frost, by which the sap vessels become injured. This may be true, but I have never seen any satisfactory reasons for the theory. An effect is produced in this way, beyond all question, but that it is the only or principal effect of severe cold, is a matter of some doubt. Heat has an expansive force—much greater than cold—but no one thinks of attributing all the summer ills of trees to this cause.

Chemists tell us that all substances are continually giving out and receiving heat. Snow, ice, and all frozen substances are non-conductors, or, what is the same thing, slow conductors. This is probably the reason why no injury is produced by severe cold of short duration. When we consider how important results follow slight changes of temperature in the warm season, it may not appear unreasonable to suppose that equally important consequences may follow similar changes at other seasons.

The settlement of this question, on the line of "fifty-four forty," or in some other satisfactory way, is a matter of no small consequence to the cultivators of fruit and fruit trees. It should be at once settled how far we may safely follow the practice of more southern cultivators, in setting peach orchards on low sandy plains. Errors in this matter of location have led many to believe that the peach cannot be grown with profit as far north as New Hampshire,—a great mistake. While some are groaning over their misfortunes and meagre crops, others seem wonderfully free both from failures and frosts.

Observation has satisfied me that seedlings are much more hardy than worked varieties. Who has ever known seedling apple trees seriously affected by the cold?

W. H. H.

Plaistow, N. H., July 8, 1852.

RAISING CREAM—ARTIFICIAL METHOD.

Some time since the papers published an account of an experiment made by a Mr. BEKAERT, of Brussels, to increase the quantity of cream from milk, which had, it was said, resulted successfully. It was confidently believed, by many persons, that a very important desideratum had by the discovery of Mr. B. been obtained. It is quite possible that the efforts of this gentleman may have evolved some new light upon the subject of his research; yet we question whether the rules he has promulgated in reference to the department of butter-making will after all, be found of much utility. We present his process, however, *in extenso*, leaving those who are desirous of adopting it to do so, if they choose. We would remark, however, as we go along, that it is somewhat difficult to conceive how the carbonate of soda can produce the result attributed to it, unless, indeed, it have a stronger affinity for the elements of the milk than the cream has, and thus allows the latter to separate more freely from it, and consequently from its greater levity "to rise."

"To every two quarts of new milk, a tablespoonful of a liquid made by dissolving in a quart of water one ounce of carbonate of soda, one teaspoonful of a solution of curcuma or turmeric, and three drops of marigold water."

The addition of the solution of soda, he states, causes a larger quantity of cream to rise to the surface of the milk than is procured in the ordinary process. The other ingredients are for the purpose of improving the color and quality of the butter made from the cream.

SHEEP RAISING AND SHEARING.

Our people do nothing by halves, we believe, except the cultivation of the ground; and that is because they do not see clearly yet that a thorough cultivation is cheapest and best. But as a general thing we prosecute with a rush any favorite pursuit or business. Our horses trot inside of three minutes—our oxen girt beyond all precedent—the cows fill the largest pails and make more butter than any cows that were ever created before, while the Suffolks are the widest and fattest and cost the least of any grunTERS that ever squealed. We have mammoth cabbages and beets, parsnips a rod long, or less, and squashes and turnips to match! With this mania upon us, it is no wonder that *some wool should be pulled* on the subject of sheep, and that such earnestness and zeal are felt in relation to them as to amount to extravagance and unjustifiable expense and risks. Still we would not suppress these buoyant and go-ahead impulses—they need tempering, but not extermination. They have set afloat our elegant steamships, built the railroads, stretched the telegraph wires; sent us into the waters of the old world with yachts that not only outstrip the genius and power of our transatlantic brethren, but the winds themselves, and enabled us to sustain the nation's skill and genius in the World's Fair!

While some are excited, others will be more cool and considerate, and occasionally apply a trig to the wheel that seems rolling too fast.

We have been led to these remarks by receiving a communication upon the subject of the late sheep shearing at Cornwall, Vt. The writer animadverted with some sharpness on the publicity given to the occasion; but we omit his strictures, believing that he will appreciate our motives, and excuse the liberties we have taken with his communication. While we admire to see the energy of a full and earnest heart in all the operations of the farm, we cannot say there is no danger of expending and risking too much in our experiments, particularly with the various breeds of animals which we rear.

The following are extracts from the letter of our correspondent:—

It is my opinion that the importers of the enormous French merino sheep are doing a bad service to our country. * * * In the sequel, they will be universally known as a poor sheep for our climate. Their reputation must wane as did that of the Rohan potato. Of the flesh of these, few, if any, have yet tasted to know its excellence. But to wool growers I would say, these are not the best sheep. Even the wool of the famous buck Napoleon, of eighteen months growth and of forty-seven pounds weight, (allowing his body after shearing to weigh three hundred pounds, which I have to guess at) is only a little more than half what it should be, to equal the last year's fleece of Mr. Holliston's Atwood Buck, of Marshfield. This fleece being of twelve months growth minus

four days, and weighing in the proportion of one pound of washed wool to five pounds of carcass. And I am informed, that Mr. Campbell, of Westminster West, the late importer of French and Silesian Merinos, took a fleece from one of his small Silesian ewes, last year, which, in proportion to the weight of carcass, was superior to that of Mr. Holliston's buck. I saw in April last, some six or eight half-blood French yearlings, which had been wintered on hay with many other lambs, and while the others looked well, these French half-bloods were only in middling condition. I was assured by the intelligent owner that they were from good hardy ewes, and had no apology for their inferior condition, but that of their French blood. Another friend had the privilege of the second best buck from a flock of half-bloods. He wintered him with his hardy Merinos; but his condition was inferior. These experiments have some weight. But every judge of sheep on seeing the French Merinos, without any experiments should come to the conclusion, that with common keeping they must pass for less than a middling sheep, and on poorer fare, such as our hardiest sheep can withstand and yet keep up a tolerably respectable appearance, they would hardly subsist. Our farmers should understand that those sheep are most profitable which require no higher food to keep them in good condition, than good pasture in the summer and good hay in winter. There are large flocks of moderately sized sheep in Vermont, the ewes of which average more than four pounds of well-washed wool, yearly, without being grain fed. Such are the Jarvis and Atwood sheep, and others not widely differing. The Merino flock of Messrs. Dort, and Lee Eastman, of East Rupert owing to the great and long practical care and skill of those gentlemen in breeding, are, I believe, unsurpassed.

PRO BONO PUBLICO.

Windsor County, Vt., June 25th, 1852.

SALT YOUR HAY.

About as much salt applied to the hay on placing it away, as the cattle would naturally eat during the time they are consuming the hay, gives it a relish which is very agreeable to the stock. Besides, hay keeps better with two or three quarts of good salt applied to the ton. Hay that is not cured thoroughly is much improved by it. Try it, alongside with that not salted, and observe whether there is a difference. You will then know next year whether it is a waste of salt or not to apply it to hay.

THE POTATO BLOSSOM.—The potato blossom this season is unusually large and handsome. It has been stated to us that whenever the potato crop has been attacked with the rot the previous blossoming has been small and meagre. Is it so?—whose observation has been directed to this circumstance?

The potato blossom, by the way, is no mean flower. Skilfully arranged and pressed with the potato leaf, in an herbarium, we have known it to puzzle many an ardent lover of flowers to tell what it was.

SWARM OF INSECTS.

Messrs. Editors:—In the *New England Farmer* of June 12th, I noticed an article describing an uncommon swarm of insects. The numbers which appeared were remarkable—the column being a quarter of a mile in width, and twenty feet in thickness, comprising, in the language of the writer, “countless millions.”

The insect alluded to, doubtless belongs to the order *Neuroptera*, which includes the Dragon-fly, May-fly, Day-fly (*Ephemera*,) &c. This was probably the May-fly, called in some sections the Shad-fly. In answer to the question, “Where did they come from?” it may be said they came from water, where they, (as do many other tribes,) pass their first stages, including the egg, larva and pupa. When they have reached the perfect, or fly state, they leave the water, and after preparing for a new generation, die.

It is not often that so many are seen at once, as mentioned in the article referred to, though they are often seen in large numbers near still water, which is favorable to their propagation. The reason that they appear and vanish so suddenly, is, the periods in which they pass through the various stages are very exact. The eggs are all produced nearly at the same time—are all probably deposited in the space of two days—the larva are all hatched together, and reach the point of maturity together, and of course appear in the winged state at the same time. The same thing is observable, more or less with most insects.

The fact of the insects all going in the same direction, as mentioned—to the southwest—I will not undertake to explain. Precisely the same thing fell under my own observation in regard to the same insect, about twenty years ago.

There is something mysterious in these flights of insects, and also in the migrations of some of the smaller animals. Locusts, or grasshoppers, frequently go off suddenly, taking to the air all at once, and all flying in the same direction. Many years ago a remarkable flight of the Dragon-fly (*Libellula*) was noticed from Massachusetts to Pennsylvania. Innumerable hosts of them filled the air for the space of an hour or more. They passed to the west, their course inclining a little to the north.

Grey squirrels, when they have been very abundant in a district, often go off in one direction, travelling day and night with great speed, swimming streams and even broad lakes, and crossing all obstacles, so far as practicable, that obstruct their line of march.

Who can explain this impulse?—*Boston Cultivator*.

REMARKS.—Since writing the article which called out the above remarks, we have seen another exodus of the same insects, in countless numbers, travelling in the same direction, and still intent of being *somewhere very soon*, as the others were; but they appeared about 5 o'clock in the afternoon.

☞ The *Rural New-Yorker*, published by D. D. T. Moore, the man who knows how to make five hundred blades of grass grow where *none* grew before, is just as bright and beautiful as ever. No wonder the ladies fall in love with it, and will have it.

Mechanics' Department, Arts, &c.

VENTILATED CARS.

The following is a more particular description of the new invention for keeping cars free from dust, than we have before seen. It is condensed from a description by the *Hartford Times*. If cars can be constructed so as to be free from dust, the greatest of annoyances of railroad travelling will be obviated:

“The invention consists, first, in a row of three large circular ventilators placed in the top of the car at equal distances apart, and flaring open so as to catch a great deal of air from the rapid motion of the car. At the height of the ventilators there is not much dust, as it does not generally rise so high in any considerable quantity, but what little enters them is caught and deposited in a reservoir partly filled with water and ingeniously attached to the bottom of the ventilator. The air thus purified from dust and cinder, rushes into the car through the ventilators, in consequence of the rapid motion. To make the arrangement still more effectual, the windows of the car have been altered, so that instead of opening perpendicularly, they open sideways like a door. Each window consists of two parts, shutting together at an obtuse angle, which projects a few inches outward from the side of the car. One part of each window is closed, and *deflects* the passing dust from the car, while the other is slightly opened inward, so as to permit a constant current of air received from the ventilators to pass out and *repel* the external dust. The invention is pronounced entirely successful by the *Times*. Mr. Paine, the water-gas man, is the inventor.”

AXES.—The most extensive axe factory in Vermont is that of Brooks & Brothers, at Beman's Hollow, on New Haven River. The ordinary manufacture amounts to a hundred and twenty-five axes per day, and runs often to a hundred and fifty. It consumes a hundred and fifty tons of anthracite yearly, and eighty tons of American iron. The steel, twenty tons, sometimes ordered direct, is from the Messrs. Sandersons, at Sheffield. Twenty-five workmen are employed, and fifty tons of grindstones are used annually.—*Brattleboro' Eagle*.

IRON FLOWERS.—A “fancy piece” has been prepared for the Prussian Exhibition by the Renard Works. It is a vase of polished coal, as solid as black marble, holding a large bouquet of flowers made of sheet iron—leaves, petals, and stems, all perfectly graceful and natural, but sable as night. The effect is singular—the complete imitation having not the least resemblance to nature, unless there are such blossoms on the banks of Acheron. It is Flora in mourning.

IRON PAPER.—At the Prussian Industrial Exhibition, Count Renard, a large proprietor of iron works, exhibits sheet iron of such a degree of tenacity that the leaves can be used for paper. Of the finest sort the machinery rolls 7040 square feet of what may be called leaf-iron, from a cwt. of metal. A bookbinder of Breslau has made an album of nothing else, the pages of which turn as flexible as the finest fabric of linen rags. As yet

no extensive application for this form of the metal has been found, but the manager says the material must precede the use for it. Perhaps books may hereafter be printed for the tropics on these metallic leaves and defy the destructive power of insects of any color or strength of forceps. We have only to invent a white ink, and the thing is done.

SMUT MACHINE.—D. Pease, Jr., of Floyd, Oneida Co., N. Y., has taken measures to secure a patent for an improvement in smut machines, which consists in spreading the grain in a superior manner to other smut machines, and regulating the spread of the grain by an adjustable top, so as to allow of the machine acting upon the grain in a very superior manner.—*Scientific American.*

Ladies' Department.

GOOD BREAD.

Mr. Weed writes to the *Albany Evening Journal*:—"We could learn one lesson from Austria with great advantage to our people. This is the art of making good bread, which, being as it is here, universal, is really a great national blessing. We were struck first at Trieste with the fine quality of bread at our hotel. At all the eating-houses between Trieste and Vienna we remarked the excellence of the bread. Here we enjoy the same luxury. Nor is it a luxury for the rich alone. The same light, sweet bread is in all the bake-shops at prices which enable all classes to purchase. England has contrived humanely to give 'cheap bread' to her people; but Austria affords it still cheaper and of an excellent quality. I do not know as this secret for making good bread can be communicated. Perhaps it is owing to some peculiarity in the flour, or in the water; but I do know that the art of making for the American people such bread as is eaten throughout Austria, would be of incalculable value. A Vienna baker who should go to the city of New York and vend such bread as we get here, would be able to ride in his coach and reside on the Fifth Avenue in two years. That is, providing Yankee bakers did not find out his secret."

SIMPLE REMEDIES.

At this season, we shall do our patrons a service by laying before them two very cheap and simple remedies.

Dysentery often proves fatal. It can easily be stopped by applying proper astringents. A preparation of creasote is getting to be a common remedy among physicians; but it is dangerous stuff. The best remedy is parched rice—burned like coffee. After it is well browned, cook it by boiling in the usual way, and let the patient eat of it. It digests in an hour, and therefore has a tolerably quick effect.

For **Costiveness**—a thing that leads to painful and often fatal diseases—there is no better laxative than salt (chloride of sodium) dissolved in water. Take a glass of warm water and dissolve a teaspoonful of salt in it, then cool with ice, and drink it off. To empty the contents of the bowels, it is the safest and best cathartic known. It does not disturb the mucilage of the intestines, and causes no pain or weakness.—*Crusader.*

LACE.

Mr. Weed, in one of his agreeable letters from Europe, gives the following notice of the mania for fine lace which is conspicuous among the forms of modern extravagance:

"The ladies visited the principal Lace Manufactory, where the Brussels article is made and sold for sums of money that would frighten prudent people. What do you think, for example, of trimming a dress with lace at \$250 and \$300 a yard? But just now the rage is for old lace. In Florence, Rome, Naples, Venice, &c. &c., traffic in old lace is very active. Ladies look for it with more solicitude than any other article of dress. Neither jewelry nor precious stones are so much prized as lace known to have been worn by a cardinal or monk a century or two ago. No lady thinks of leaving Italy without securing some of their precious spoils. Of course, the supply of old lace keeps pace with the rapidly increasing demand! How much of it is *genuine* I will not undertake to say. Every lady is quite sure that she can detect the antique from the modern."

Dr. Franklin, in speaking of education, says, "If a man empties his purse into his head, no one can take it from him."

Boy's Department.

GET UP BEFORE THE SUN.

Get up before the sun, my lads,
Get up before the sun!
This snoozing in a feather bed
Is what should not be done.
Between sunrise and breakfast, lads,
Rise, breathe the morning air,
'Twill make you look so bright, my lads;
'Twill make you look so fair.

Get up before the sun, my lads—
Shake off your sloth—arouse!
You lose the greatest luxury
That life has, if you drowse,
Between sunrise and breakfast, lads;
Arise, then, do not lose
The key to health and happiness,
By lying in a snooze.

Get up before the sun, my lads,
And in the garden hoe,
Or feed the pigs, or milk the cows,
Or take the scythe and mow;
'Twill give you buoyant spirits, lads,
Give vigor to your frame—
Then rise before the sun, my lads,
And these rich blessings claim.

THE STORKS AN EMBLEM OF FILIAL AFFECTION.—

The storks are birds very much venerated in the East on account of their love for their parents. These birds are said to take care of their parents when they become old and lose their feathers, so that they cannot fly. They hover over them when exposed to cooling damps, drive off all their enemies, bring food for them, and when, on the wing, their aged mother tires, they bear her on their own back.

"The stork's an emblem of true piety;
Because, when age has seized and made his dam
Unfit for flight, the grateful young one takes
His mother on his back, provides her food,
Repaying thus her care of him,
Ere he was fit to fly."

Agricultural Cleanings.

FARMING IN CALIFORNIA. Much attention appears to be paid to farming in California, and the prices paid for produce must make it a profitable investment of time, labor and money. 100,000 acres are said to be under cultivation in the State; and so well does it pay, it is expected that three times as much will be cultivated next year. Orchards and vineyards are growing, and the fencing in of land and reclaiming is proceeding steadily. In regard to tools, the *San Francisco Current* says: "The agricultural implements heretofore imported have in many instances been unsuited for use, and rendered alterations necessary, to meet the peculiar conditions of this soil and climate. This has induced the local manufacture of tools, which is now extensively carried on."

AGRICULTURE IN GERMANY.—A traveller by railroad from Dresden to Hanover on the 18th of May, gives the following description of the appearance of the fields on the route of his day's journey:

"The country through which we passed is smiling in all the luxuriance of spring. The fields of rape, glowing on all hands with their blossoms of intense yellow, looked as though columns of butterflies had settled down upon them. Most of the lamp oil used in Germany is made from the rape seed. Later in the season, the fields of poppies unfold their blossoms of blushing red. From these seeds an oil of better quality is expressed, used for the table and for other purposes. Poppy seeds are also an important ingredient in some of the varieties of cake, so abundantly produced in the German cuisine."

A MARYLAND FARMER.—The Easton (Md.) *Star* says, that Col. Edward Lloyd, of that county, with his own servants—numbering near four hundred—some nine or ten farms—about 6,000 acres of land, including timberland, raises annually between 30,000 and 40,000 bushels of wheat, and a much larger quantity of corn; besides various other valuable products. Besides these extensive operations in Talbot, he has a plantation carried on in the State of Mississippi, worth several hundred thousand dollars, and his annual income cannot fall short of \$150,000. His residence is one of the most splendid in this country, and has been the homestead of the Lloyd family since their first settlement in Maryland.

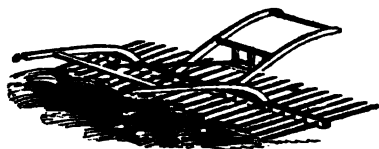
WHISKEY-FED HORSES.—Some of the horses employed on the Harlem railroad may have been noticed as having a peculiarly "hard look," and a few may be considered as regularly installed into the fraternity of "bruisers." It appears that during this warm weather they are each in the habit of taking their "drop" of whiskey and water, in order to better qualify them for labor. This mixture is regarded as an improvement on the usual

beverage of horses in its native state, and as protecting the animals from the effects of the sun. Wait a while, and you shall know whether this opinion is correct. For ourselves, we very much doubt its correctness.—*N. Y. Jour. Commerce.*

POTATO CROP.—From present indications, we shall have but few if any potatoes, this season, in our vicinity, as within the last week the most extensive ravages have been committed by a long dark insect, which appears in myriads, and is known here as the potato bug. They make quick and certain work of it, and the opinion is that where they have commenced operations there will be no vestige left.—*Fishkill Standard*, July 15.

GRAPE CULTURE.—There are at least 1,200 acres of vineyards around Cincinnati alone, giving employment to no less than 600 efficient laborers, at an annual cost of \$20,000, and producing, in moderately favorable seasons, 240,000 gallons of wine. Most of those engaged in the culture of the vine have families to support. It is calculated that the wine interest in Hamilton county affords subsistence, directly and indirectly, to 10,000 industrious and sober people.

Haying Tools.



1000 dozen superior Grass Scythes.

PHILLIPS, Messer & Colby's—Darling's—Farwell's—Mansfield & Lamb's—Keyes & Dunn's.

Also, Lawn, Grain and Bush Scythes, of the best quality.

1000 dozen Scythe Sheaths.

Patent Grass, Lawn and Bush Sheaths, from the best manufacturers in the country.

2500 dozen Hay Rakes.

Hall's, Simonds's, Carpenter's, Page & Wakefield's, Robinson's, Duggan's and English best Hand Rakes.

500 Drag Rakes.

This Rake is a hybrid between the Hand and Horse Rake; every good farmer should have one or more.

3000 dozen Scythe Rifles.

Clark's celebrated Whetstone Grit and Emery Rifles. Also, Austin's, Anson's, Willard's, and others.

200 gross Scythe Stones.

Quinebang, Chocolate, Norway Rag and Indian Pond; also, Woodward and Talacre (English) Scythe Stones.

20 tons Grindstones.

A well selected assortment of the celebrated Blue Sheet, warranted. Also, Grindstones of all sizes, mounted on frames and rollers complete.

Grindstone Fixtures, viz.: Flanges, Arbors, Cranks and Rollers.

800 Horse Hay Rakes.

Delano's Patent, Revolving and Spring Tooth Hay Rakes; all of which will be sold at wholesale or retail, at very low prices, by
RUGGLES, NOURSE, MASON & CO.,
June 15. Over the Market, Boston.

State Mutual Life Assurance Co. OF WORCESTER.

GUARANTEE CAPITAL, \$100,000.

Hon. JOHN DAVIS, President.

Hon. ISAAC DAVIS, } Vice
Hon. STEPHEN SALISBURY, } Presidents.

THIS Company was chartered in March, 1844, and commenced business on the first of June, 1845. Its business is conducted on the most economical principles.

The well considered and invariable policy of this Company has been to prefer the safety and mutuality of the assured to the showy advantages of a large number of policies, and an imposing amount of receipts. California risks have been uniformly declined, and the multiplication of policies in cities considered especially liable to cholera has not been encouraged.

The cash premiums of this company are calculated on the most approved tables of the probability of life, and at the lowest rates which are deemed safe.

Pamphlets, explaining the principles and advantages of life assurance, with forms of application and rates of premium, may be had by application at the Office of the Company in Worcester, or of the Agents in all the principal towns in New England.

CLARENDON HARRIS, Secretary.

Dec. 27, 1851.

Pure Devon Stock.

COWS, HEIFERS, BULLS and BULL CALVES for sale.

Apply at Office of N. E. Farmer, or to the subscriber.

B. V. FRENCH,
Braintree, Mass.

1yr



Dec. 27, 1851.

Mexican Guano.

A NEW ARTICLE is now offered to the Agriculturist and Dealers, under the above name, from its having been found near the Mexican coast. It has been analyzed by C. T. Jackson, M. D., State Assayer, Boston, Dr. David Stewart, of Baltimore, and others. Dr. Stewart says it contains the largest proportion of Phosphates he has ever met with in Guano.

The following are the result of the analysis made by C. T. Jackson, M. D.:

Water.....	23.40
Vegetable Matter.....	15.80
Soluble Salts (in Water) Phos. Soda.....	0.12
Phosphates of Lime and Magnesia.....	60.60
Insoluble Matter (Silex).....	0.10

99.92

The quality of this Guano as a rich fertilizer, and the great reduction in price compared with the Peruvian, is such as to render it an object for the agriculturist and dealers to buy and give it a trial. It has been tried in the vicinity of Norfolk, Va., and much approved by the Farmers, those who are now buying and using of it freely. It may be obtained in lots to suit purchasers of A. D. WELD, 127 State Street, PHINEAS SPRAGUE & Co., T Wharf, or of P. A. STONE, who is the importer, and may be found at 15 Crescent Place, Boston, where also other information may be obtained respecting it. It is also for sale by Parker & White, 8 and 10 Gerrish Block, Blackstone Street, D. Prouty & Co., 19 North Market Street March 27.

Albany Drain Tile Works,

No. 60 LANCASTER STREET,—West of Medical College.

THE subscriber has now on hand, and will furnish to agriculturists, Horse Shoe and Sole Tiles of the most approved patterns, suitable for land drainage, of a superior quality, of over one foot in length. Horse Shoe Tile 2 1/2, 3 1/2 and 4 inches calibre, at \$12, \$15 and \$18 per 1000 pieces. Sole Tile 2 1/2 and 3 1/2 inches calibre, at \$12 and 18 per 1000 pieces. They are so formed as to admit water at every joint, draining land from 12 to 20 feet each side of the drain, being the cheapest and most durable article used. The great importance of thorough drainage is daily becoming more apparent.

Orders from a distance will receive prompt attention.

Albany, N. Y., April 10. 12w—26 JOHN GOTT.

Carrot and Turnip Seed.

WE HAVE FOR SALE,

1000 lbs. Orange Carrot Seed;
500 lbs. Yellow Ruta Baga Turnip Seed;
500 lbs. White Flat Turnip Seed.
Also, 300 lbs. Mangel Wurtzel Beet Seed;
100 lbs. White Sugar Beet Seed;

ALL of which were grown expressly for us, and are of the best quality.

RUGGLES, NOURSE, MASON & CO.,
May 29. 12w Over Quincy Market, Boston

The Farmers' Library.

JUST RECEIVED, the following assortment of Agricultural and Horticultural Books, embracing the standard works of eminent American and European writers, on the Farm, the Orchard, the Garden, &c. &c.

	PRICE.
American Farm Book, by Allen,	\$1.00
Farmer's Treasure, by Faulkner and Smith,	.75
Dana's Muck Manual,	1.00
Prize Essay on Manures, by Dana,	.25
American Muck Book, by Browne,	1.00
Lectures on Practical Agriculture, by Johnstone,	.75
Elements of Scientific Agriculture, by Norton,	.50
Principles of Agriculture, by Thaez,	2.50
Practical Agriculture, by Johnstone,	.75
Agriculture for Schools, by Blake,	1.00
Catechism of Agriculture and Chemistry, by Johnstone and Norton,	.25
American Agriculturist, by Allen,	1.00
Liebig's Complete Work on Chemistry,	1.00
Farmer's and Emigrant's Hand Book, by Marshall,	.75
Home for all, by Fowler,	.50
Book of the Farm, by Stephens and Skinner,	4.00
Cottage and Farm Houses, by Downing,	2.00
Downing's Country Houses,	4.00
Rural Architecture, by Allen,	1.25
Downing's Landscape Gardening and Rural Architecture,	3.50
Downing's Cottage Residences,	2.00
Fruit Garden, by Barry,	1.25
Complete Gardener and Farmer, by Fessenden,	1.25
Bridgeman's Gardener's Assistant,	2.00
Bridgeman's Kitchen Gardener's Instructor,	.50
American Fruit Culturist, by Thomas,	1.00
Gardener and Complete Florist,	.25
Florist's Guide, by Bridgeman,	.50
New England Fruit Book, by Ives,	.50
Youatt and Martin on Cattle, by Stevens,	1.25
Rose Culturist,	.38
Johnson's Gardener's Dictionary, by Landreth,	1.50
Rural Economy, by Boussegault,	1.00
American Rose Culturist,	.25
Bigelow's Plants of Boston,	1.25
Genera of Plants of the U. S., by Gray, 3 vols.	12.00
Gray's Botany,	2.10
Farnell's Chemistry,	1.00
New England Farmer, by Cole,	1.00
Ladies' Guide and Skillful Housewife, by Mrs. Abel,	.25
Hive and Honey Bee, by Richardson,	.25
Bee Keeper's Manual, by Miner,	.50
Bird Fancier, by Browne, paper 25 cents,	.50
Townley on Bees,	.50
American Poultry Yard, by Browne,	1.00
American Poultryers' Companion, by Bement,	1.00
American Fowl Breeder, by Moore,	.25
American Herd Book, by Allen,	3.00
American Shepherd, by Merrill,	1.00
Domestic Animals, by Allen,	.75
Diseases of Animals, by Cole,	.50
Hints to Sportsmen, by Lewis,	1.25
Dadd's Anatomy and Physiology of the Horse,	1.00
Mason's Farrier and Stud Book, by Skinner,	1.25
Management of Sheep, by Cusfield,	1.00
Youatt on the Pig,	.60
Knowlson's Complete Cow Doctor,	.25
Horse Doctor,	.25
Guenon's Treatise on Milch Cows,	.38
Treatise on Hot Houses, by Leuchars,	1.00
Allen on the Grape,	1.00
Loudon's Encyclopedia,	10.00
Schenck's Text Book,	.50
Breck's Book of Flowers,	.75
Downing's Fruit and Fruit Trees,	1.50
For sale at the Publishers' prices by RUGGLES, NOURSE, MASON & Co., Quincy Hall, (over the Market,) Boston.	

April 3, 1852.

Garden Seeds.

WE respectfully solicit the attention of purchasers of GARDEN SEEDS to our extensive stock, which we offer for sale. We have all the sorts of Vegetable Seeds that have proved worthy of cultivation; also, Grain, Grass and Flower Seeds. All the varieties are raised and selected expressly for our trade, and we do with confidence recommend them to all who desire to procure seeds that will prove true to their names.

Jan. 1.

RUGGLES, NOURSE, MASON & CO.,
Over Quincy Market, Boston.

Bound Volumes.

BACK VOLUMES of the NEW ENGLAND FARMER, elegantly bound in Muslin Gilt and Embossed, are now for sale at this office.

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Thorough Bred Devon Stock AT AUCTION.



The subscriber will offer at Public Sale, on WEDNESDAY, the 2^d AUGUST, 1852, at his residence in FARMINGTON, Ct., about thirty (30) Head of Pure Devon Cattle consisting of Cows, Heifers, Bulls, and Bull and Heifer Calves.

This stock was derived principally from the herds of Geo. Patterson Esq., of Maryland; R. S. Colt, Esq., of New Jersey; the Messrs. Hurlbut, of Winchester, and from imported stock, and have been bred with a particular reference to their dairy qualities. All Cows and Heifers offered are or will be previous to the sale, in calf to my Prize Bull Prince Albert, a descendant of Geo. Patterson's celebrated imported Bull Eclipse, and my Prize Cow Victoria, which was awarded the first premium in 1851, at Albany, in the class of foreign stock, and was sold at the same time for \$180 to C. B. Cook, Esq., of Charlotte, Vt.

Catalogues giving a particular description of each animal, with their pedigrees, can be had at the offices of the principal Agricultural Journals, or on application to me by mail, or otherwise. The sale will take place at 12 o'clock A. M., the 25th inst., and the stock will be ready for examination at 10.

I will also offer at the same time and place, my Superior Morgan Stallion Young Gifford, 5 years old; a Colt of the celebrated old Gifford Morgan and from a Morgan Mare.

Also, a Morgan Filly, 1 year old the 13th day of May last, by the above horse and from a fine Morgan mare, bred by Am. brose Arnold, Esq., Westminster, Vt., "a superior colt."

☐ Terms made known at the sale.

WM. L. COWLES.

Farmington, Ct., July 10th, 1852.

Suffolk Pigs.

Those who wish to procure SUFFOLK PIGS for breeders, (warranted pure and very fine,) can be supplied at short notice by applying at this office.

May 1, 1852.



For Sale Cheap.



A small Farm, in the flourishing town of Stoughton, Mass., containing about ten acres of land,—a good location for a mechanic. The land consists of three or four acres good tillage,—the rest woodland; with an inexhaustible Granite Ledge, which has been worked for the past three years. There is a good dwelling house, and stable, and other out-buildings on the premises which have been built about three years. Also, a good well of water, and a number of fruit trees.

The place is within 2½ miles of three Railroad Depots, at Stoughton, East Stoughton and West Randolph. \$600 of the purchase money can remain on mortgage 3 or 4 years if desired.

For further information inquire of the subscriber on the premises.

ENOCH DICKERMAN.

July 10, 1852.

3m

Horse Empire State.

This splendid Horse, which was the admiration of all who saw him last season, has again made his appearance, and will be kept at MATHEW'S STABLE, ROXBURY, for the improvement of stock.

Said horse is of the Messenger and Durock stock, and is of a beautiful jet black color, weighs 1150 lbs., and is thought by competent judges to be the handsomest, fastest and best entire horse in New England.

Roxbury, April 24, 1852.

1f

NEW ENGLAND FARMER

Is published on the first of every month, by JOHN RAYNOLDS and JOSEPH NOURSE, at Quincy Hall, South Market St., Boston.

SIMON BROWN, Editor.

FREDERICK HOLBROOK, } Associate

HENRY F. FRENCH, } Editors.

☐ Terms, \$1.00 per annum in advance.

☐ All subscriptions to commence with the volume, Jan. 1.

The FARMER, is devoted *exclusively* to Agriculture, Horticulture, and their kindred Arts and Sciences; making a neat volume of 676 octavo pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at the office of publication.

☐ Also published at the same office every Saturday, on a large handsome folio sheet, the

NEW ENGLAND FARMER, (WEEKLY),

An Independent Agricultural Family Newspaper.

The News and Miscellaneous departments under the charge of WILLIAM SIMONDS, will include a full and careful report of the news of the Markets, and the news of the week, such as Domestic, Foreign and Marine Intelligence, Congressional and Legislative proceedings, Temperance and Religious Intelligence, and a general variety of Literary and Miscellaneous matter, adapted to family reading, comprising more useful and valuable reading matter than any other Agricultural Newspaper published in New England. Everything of a hurtful or even doubtful tendency will be carefully excluded from its columns.

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The monthly contains nearly the same matter as the Agricultural department of the weekly.

☐ Postmasters and others, who will forward four new subscribers on the above named terms, for either publication, shall receive a fifth copy gratis for one year.

☐ All orders and letters should be addressed, *post-paid*,

RAYNOLDS & NOURSE,

QUINCY HALL, SOUTH MARKET STREET, BOSTON.

The postage on the New England Farmer, monthly, is as follows:

For any distance not exceeding 50 miles	5 cents per year.
Over 50, and not exceeding 300 miles	10 cents per year.
Over 300 " " "	1000.....15 " "
Over 1000 " " "	2000.....20 " "
Over 2000 " " "	4000.....25 " "
Over 4000 " " "	.....30 " "

To prevent any misunderstanding, we quote the 16th section of the law of 3d March, 1845, which is as follows:

Sec. 16. And be it further enacted, that the term "Newspaper," herein before used, shall be, and the same is hereby defined to be, any printed publication, issued in numbers consisting of not more than two sheets, and published at short stated intervals of not more than one month, conveying intelligence of passing events, and bona fide extras and supplements of such publication.

RAYNOLDS & NOURSE, PROPRIETORS.
OFFICE...QUINCY HALL.

SIMON BROWN, EDITOR.

FREDK HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

FARM WORK FOR SEPTEMBER.

"The harvest-men ring Summer out
With thankful song and joyous shout;
And, when September comes, they hail
The Autumn with the flapping sail."

The Summer for 1852 has past away, and Autumn, with its gentle influences, has come to lead us quietly and gradually into the embraces of Winter. If summer has its fierce heats, its sudden showers with the lightning's flash and thunder's roar,—its profusion of flowers and songs of birds, autumn has no less its own character, which distinguishes it from all other seasons. It has succeeded, perhaps, a season of intense heat, causing copious evaporation when the usual rains have fallen, and giving heavy dews and fogs. The peculiar feature of autumn is that of tranquillity, but interrupted by the September equinoctial and some other changes.

In September, the vegetable tribes have advanced through their stages of production and maturity, and are approaching the verge of old age. But still, the earth is clothed in beauty. The fields so lately mown are covered with the liveliest green by the young clover, or tinted with their varied flowers. The corn looks rank and strong and begins to beam with gold, while the pastures assume a cheerful hue, refreshed by the periodical rains.

The woods have exchanged the soft green of spring for the more sober shades that indicate maturity, but maintain their leafy pride and hide in their shade the various nuts which they produce. The birds which love to be near the habitations of men, have mostly left to people other lands and cheer the laborers of other fields. Now and then the bob-o-link, on russet wing, flits by, or the lark springs from the meadow, whistling as he mounts to the clouds.

So autumn has its own peculiar character, and these are a few of its foreshadowings. The hurry and bustle of haying being over, the husbandman pauses in his labor and takes a retrospec-

glance at his past efforts; then examining the standing crops, meditates upon what there is farther to be done. He brings into view the operations of the coming spring, and inquires whether this field shall remain in grass or be sowed with summer grains; whether the meadow now luxuriating in hessocks, hard-hack, skunk-cabbage and elecampane shall be browsed another year by the cattle, or shall he add a sturdy team, a stout plow with a little "hook farming," and make it turn out two tons to the acre of good herds-grass and red-top next July. In his survey he brings into view all the operations of the farm, the orchard, the garden, pastures, meadows, hill and plain land and swamps. He finds still enough to do—that labor is most beneficently diffused over the year, so as not to cause too great a pressure of employment at any season; and the perfected crops being gathered, while waiting for the great Indian corn harvest and the roots and fruits, he turns his attention more particularly to the permanent improvements of the farm, such at first as

DRAINING.—When the springs are low and little water is flowing from the hills is a good time to engage in this most important operation. You will plow deep and sub-soil in vain, if the cold water trickles from the hills and passes through the bottom which you have plowed in search of an outlet. It will exclude sweet and nutrient vegetation. When you contemplate plowing meadows and swamps, thorough draining must be the pioneer, or disappointment will be the result. When the drainage is complete, we have only to reiterate the remarks recently made of applying a suitable team and plow, at first, and there may be profit in reclaiming almost any swamp or meadow. They are among our best New England lands, being composed of the wash of the hills and rich accumulations of successive ages.

Ditching through the lower part of meadows does not accomplish the work desired; the water will be created and led off before it flows over

the ground to be cultivated. In order to do this, the ditch must be placed near the base of the hill and the water conveyed away along its side, leaving the meadow dry and light and open to the influences of the sun and air. Then there will be success—good crops and cheerful hearts.

SANDY OR GRAVELLY KNOLLS.—There are such places on most farms that have become unproductive. If they throw up vegetation in spring, a few hot suns cut it down, and thus labor and crop are lost. These are the places for the application of meadow mud. It supplies the humus, or vegetable matter which is lacking, and this, with the addition of compost, brings them up to fertility and profit. It is but carrying back to them the soil which they have gradually lost.

BLASTING ROCKS.—Since our plows are of more delicate construction, and the introduction of horse-rakes, large stones in the midst of the field are found to be serious interruptions to clean and pleasant husbandry. Any one apt with tools may "drill and blow." But there are certain essentials to be observed, or you "drill and blow" at a loss. The first important labor is to separate the rock completely from the surrounding earth and leave it free to expand when the powder presses upon its centre. This is often omitted by those engaged in the business. After the hole is charged, cover the whole with moist earth and place as much weight upon it as can be conveniently done; this helps to prevent the charge blowing out, causes an instant's resistance, and in that instant the sides of the rock yield to the pressure within. There are appropriate times in September for this work.

MANURE HEAPS are the gold mines of the farmer. Pile up the meadow mud before the autumnal rains prevent your getting it. Throw it into large heaps in convenient places, and let the air and frost work upon it. Cover the surface of the barn-yard with it; mix with green manure for top dressing or spring use. Lay up a stock for winter use, under cover if convenient.

WINTER RYE.—This is a wholesome and economical grain. Sow early in the month, if you did not get the crop in in August.

CUTTING CORN STALKS.—We have no doubt but that cutting off the tops of the corn stalks somewhat injures the crop of corn; but after all, what is gained in getting better fodder, and in harvesting it more conveniently, will compensate for the loss in the grain. There is no better fodder, in our opinion, than corn tops. At the south, some persons practice stripping the leaves from the stalks and tying them in small bundles, which sell for one to two cents a bundle. After the tops are cut they should be laid loosely among the hills and kept from the ground until partially dried, when they may be tied up in small bundles and shocked. After standing a week or two in this condition,

they ought to be laid away in such a manner in the barn as to allow a free passage of air through them, to prevent moulding.

ROOTS.—These must be looked after in season,—the potatoes, carrots, beets, ruta bagas, turnips, &c. Beans are to be gathered; squashes preserved from frost; early apples collected, and numerous other small matters attended to.

PRUNING.—This is an operation which we think should be performed in autumn; but as we have extended our remarks upon September work as far as we have room, we shall speak of this subject another week.

For the New England Farmer.

MERINO-SHEEP.

MESSRS. EDITORS:—As a matter of record, I forward you the number and amount of shipments of Merino sheep purchased by me in France, and shipped at Havre for New York:

May, 1851.....	Per steamer Franklin.....	100
" ".....	Per ship Havre.....	10
July, ".....	Per ship Samuel M. Fox.....	30
" ".....	Per ship Carleca.....	25
" ".....	Per ship George Harburt.....	50
August, ".....	Per ship Seine.....	47
" ".....	Per ship Galena.....	56
		308

April, 1852.....	Per ship Princeton.....	15
" ".....	Per steamer Franklin.....	151
May, ".....	Per steamer Humbolt.....	109
		275

In all 583. Of this number 527 were ewes, the balance rams purchased of Mons. Gilbert & Cugnot, except two from the government flock at Rambouillet and one from M. Guerin. Fifteen died on the passage, most of which cost me 500 francs per head in France. The average cost of transportation, including feed and fixings, is \$26 per head. Insurance at sea (not by natural death or starvation) is \$10 on the \$100. To purchase and ship a small lot of sheep, the expense would be much more per head.

There are three private flocks in France of pure Merinos, descendants from the government flock, which will average one-fourth larger in size and heft of fleece than the flock at Rambouillet. At Rambouillet, twelve old ewes were slaughtered this year, but none were sold from that flock, last year or this, as they wished to increase the number of ewes.

HON. WILLIAM C. RIVES, our minister at Paris, is industriously collecting facts, and about publishing a history of the Agriculture of France, embracing all the valuable information in regard to the rearing of live stock, and where the best breeds may be found, which will be of great value to the agriculturists of the United States; to whom I would refer every person seeking information relating to the above subjects.

SOLOMON W. JEWETT.

Middlebury, Vt., Aug. 10, 1852.

REMARKS.—We know Mr. RIVES well, and can endorse Mr. JEWETT's recommendation. We are happy to hear that he is engaged in collecting materials upon the Agriculture of France.

MR. MECCHI'S MODEL FARM.

Yesterday a large party of agriculturists and others assembled at Tiptree Hall, in pursuance of an invitation to examine the crops on Mr. Mechi's model farm—the new system of irrigation lately adopted by him—and the trial of some agricultural machinery. Amongst the company present, numbering about 250 gentlemen, we noticed the Rt. Hon. the Earl of Fortescue, the Right Hon. Viscount Ebrington, his Excellency the American Minister, Baron Bentinck, the Netherlands Minister, Col. T. B. Lawrence, Le Viscomte Curzay; the Hon. J. L. White, Commissioner from the United States; Mr. H. S. Rough, do.; Colonel Childs, United States; Sir J. Duke, M.P.; Sir T. Tanard, Major Skinner, Mr. E. Chadwick, Mr. Raymond Barker, Mr. Fisher Hobbs, Mr. Mark Phillips, &c., &c.

The company arrived about 11 o'clock, and having partaken of refreshment, proceeded to view Mr. Mechi's farm, which extends over 172 acres of ground, which, 10 years since, was a barren waste. About one-half of this ground now bears a luxuriant wheat crop, the remainder being occupied with clover, mangel, cabbage, swedes, &c., all bearing testimony to the excellence of the management. The company was first conducted through the wheat fields, in which Mr. Mechi explained and showed by practical experiment, how he throws liquid manure over the land by means of steam-power and a small hose, invented by Messrs. Burgess and Lee. This manure, the refuse of the house and the farm, is collected in a tank, and kept in constant agitation by means of compressed air. It is then mixed with water, and distributed over the farm from various standards by hose, as occasion may require. Mr. Mechi maintaining that it tends to materially improve the crops, as the sewage or manure, being delivered on the land in a liquid state, immediately sinks into it, and, from "chemical affinity," combines with the earth. The length of each hose, from the standards of which we have spoken, is about 200 feet, and the manure is thrown in a shower a distance of about 60 feet more. Mr. Mechi stated that though applying this liquid manure to his gardening operations, he had not done so to his wheat until some of it was accidentally allowed to run over a portion of the land, and the effect in improving the value of the crop was so instantaneous and undeniable, that he determined to apply it throughout, and the result was, that his wheat, which before was extremely backward, had at once sprung into a magnificent crop. The quantity of wheat sown was about five pecks to the acre, of which nearly two-thirds was supposed to have been destroyed by the wireworm, yet it was expected to produce, at an average, about five quarters per acre. The reaping machines of Messrs. McCormick and Mr. Hussey, as manufactured by Messrs. Crosshill and Mr. Garrett, were then tried, and all of them cut the wheat with the utmost expedition and regularity, but that of Mr. Crosshill appeared to us to be the most valuable, from the manner in which the corn, when reaped, was laid in heaps for the laborers to form into sheaves. A trial of Mr. Hussey's machine, as manufactured by Mr. Garrett, having been also made on the clover, which it cut equally well, Mr. Mechi took the company over his clover, mangel, cabbage, and swede fields, the whole of which

were in excellent order—the majority of them having been treated with the liquid manure only—and the host explained that it was his intention to thin the swedes and cabbages, in order to give the remaining crop room and nourishment to grow to a greater size. Mr. Mechi contends that, under the system adopted upon his farm, the whole of the filth and garbage of London and other large towns might be immediately rendered valuable for manuring the adjacent country districts, thereby affording an advantage to both, to the one by cleansing, and to the other by fertilizing.

The fields having been inspected and generally approved, the company visited the farm buildings, the form and nature of which are so well known to our readers from the models in the Great Exhibition of last year. The stock appeared generally in good condition, but the cattle seemed to be ill at ease in standing on the flooring with the interstices between the laths; and we cannot help imagining that the pain in which they seem to be must prove detrimental to the value of the meat.

The company having been thus occupied, and apparently highly pleased, for about three hours, returned to the house, where a very excellent cold collation was served. On the removal of the cloth, the chairman (Mr. Mechi) gave the usual loyal and patriotic toasts, which were responded to with the utmost enthusiasm.

Mr. LENNARD, late M.P. for Maldon, then, at the request of the chairman, proposed "Success to Agriculture, British and Foreign," combining with it the names of Mr. Abbott Lawrence and Baron Bentinck, the representatives of two nations both distinguished for their agriculture. He had a great regard for America, notwithstanding she was still in the swaddling clothes of Protection, which the mother country had, in his opinion, long since wisely thrown off.

Mr. LAWRENCE returned thanks, and expressed the great gratification he felt at being present at that meeting, as he had also last week at the Royal Agricultural Society at Lewis. America was naturally proud of her connection with England, and should the time ever arise when the mother country was oppressed by fear or otherwise, she might rely upon the assistance of her daughter. Mr. Lennard had spoken of America as being in the swaddling clothes of Protection; and though he did not wish to take any part in politics, he might be allowed to state that, before she had worn the garment one-half or one-quarter the time that it had been worn by England, and found herself in a position to supply the world here with agricultural produce or manufactures, she would throw it off. (Cheers and laughter.) He was glad to see himself surrounded on that occasion by so many distinguished individuals, and especially by two of his own countrymen, the Hon. J. L. White, who had formerly represented, in Congress, one of the largest agricultural districts in the Union, and Col. Childs, who had lately surveyed a line of communication, by canal, between the Pacific and Atlantic Oceans. The plans of that canal had been submitted to two celebrated American engineers, who had reported in its favor, and since the arrival in this country of his hon. friend, and Mr. Rough, as commissioners from the United States, the plans had also been submitted by the government to two English engineers of eminence, who, likewise, he was happy to state, had, on

Saturday last, confirmed the report of the American engineers. (Cheers.) He might be told that that had nothing to do with agriculture, but he contended that it must add materially to the commerce of the country, and that the interest of commerce and agriculture were indissolubly combined. (Cheers.) He was happy to be enabled to acknowledge the compliment which had been paid not only to the country of which he was a representative, but to that of his honorable colleague, Baron Bentinck, nearly one-half of Holland having having been reclaimed from the sea. He was also delighted at being able to express the gratification he had felt at the proceedings of the day, and, as had been truly said, that the man who caused two blades of grass to grow where one had only grown before, he was a benefactor to his country, it might be truly said that Mr. Mechi was a great public benefactor, and he was assured that England, with her 44,000 or 45,000 square miles of territory, might easily double the produce of her land if she adopted this system of Mr. Mechi.

Sir JAMES DUKE, M. P., proposed "The Royal Agricultural Society," feeling the greatest gratification in doing so, from his knowledge of the good it had conferred on the agricultural body. He was proud to know that a citizen of London had, by his enterprise, shown the agriculturists what might be done by science to improve the land, and he trusted that both that gentleman and the agricultural body would reap the advantage of his exertions. He believed that the recent changes in the commercial policy of the country had benefited other branches of the community, at the expense of the agricultural body; but he hoped the agricultural interest was about to revive and partake of the general prosperity. In conclusion he begged to propose this toast, combining with it the names of Mr. Raymond Barker and Mr. Fisher Hobbs. (Cheers.)

Mr. RAYMOND BARKER having acknowledged the toast,

Viscount EBRINGTON stated that he had been requested to propose the toast of "Sanitary Reform," and he did so with great pleasure, as their worthy host had that day shewn them how intimately it was connected with agriculture. It was deeply to be regretted that the refuse of towns was allowed to poison the air, and spread disease and contamination abroad, when, by proper management, it might be made to fertilize and improve the land. The Agricultural Society of England had offered a prize of £1000 for the discovery of a manure as a substitute for guano, and here they were allowing one of the most valuable of fertilizing agents to be wasted for want of proper management. The noble lord then went on to contend that the sanitary improvement of London had been thwarted by a jealousy of what was called centralization, and an outcry for local government. That local government had hitherto only led to there being half a dozen or more of wards who were always in litigation one with another; and what he wanted to see was consolidation, not centralization, without which no really useful measure could be carried, as at present there were 2,500,000 people in London, who would neither govern themselves nor allow others to govern them. (Cheers.)

Alderman CHADWICK acknowledged the toast, and entered into a variety of details to show the

advantage of drainage, not only on agricultural produce, but upon the health of man.

The Earl of FORTESSUE proposed the health of the chairman, who, he felt, in the words of Mr. Lawrence, might justly be described as one of the greatest benefactors to this country, he having not only caused two blades of grass to grow where one had grown before, but upon land which, previous to his taking it, was a perfect waste. No better exemplification of the benefits Mr. Mechi had conferred on the district could be had than the one he received that morning from the driver of the carriage in which he came over with his friend Mr. Mark Phillips from the railway station. He (the Earl of Fortescue) having remarked to his friend how well the crops looked as they passed along, the driver of the carriage said, "Ah, sir, it is all owing to that Mr. Mechi. When he first came here the farmers laughed at him, but now they are obliged to improve their farming lest somebody should laugh at them." (Cheers.)

The toast was drunk with loud applause.

Mr. MECHE returned thanks for the flattering compliment paid him, though he felt he had done nothing more than perform his duty. He had been met with prejudices—a prejudice which was a bar to all improvement, but he felt assured that the time must come when the farmers would be compelled to improve their system of cultivation. He had lately been down to Lewes, and had been struck with the poverty of the land between London and Lewes, through which the railway ran. He had heard at the exhibition a great deal about the fat stock, but he had heard nothing of the lean lands, which, in order to render them valuable, must be farmed like those of Norfolk. If the farmers brought to the exercise of their business more energy, more capital, more skill, and less prejudice, they might depend upon it, it would be greatly to their advantage in a sanatory point of view. London, which stood on a clay basin, surrounded by chalk hills, would be greatly benefited by efficient draining, whilst the drainage might be made advantageous to the country. His land had been drained on the plan of Mr. Fowler, which rendered any large excavations unnecessary, his drain-pipes being forced through the land by the aid of machinery, and a knife connected with the pipes, which, though it cut the land, left scarcely any mark behind it, a plan which might be generally adopted with advantage. He had no doubt that within 100 years the system of high farming would become general, and, by the application of science, increase the returns from the land. (Cheers.) Mr. Mechi then went on to advocate a general system of education, as laborers, at present, when brought into connection with machinery and steam-power, from the want of education, did not know how to apply it. (Cheers.)

The health of the foreign visitors were then drunk, the toast being acknowledged by the Hon. J. L. WHITE, in a most humorous speech, in the course of which he pledged himself as an American, and, knowing the feelings of the American people, that the natives of the United States looked on England with the utmost reverence, as the land of their forefathers, and should anything ever occur to place her liberty in danger, she would only have to hint that assistance might be required, when 500,000 rifles and 500,000 stalwart arms would be ready for her protection.

It being now eight o'clock, the company separated, a large portion returning to town by special train on the Eastern Counties Railway.—*London Morning Post*.

BATHING—THE SKIN.

Many apologies are made by persons for a neglect of habitual bathing—some urge a want of time, others a want of inclination, and a half belief that it is unimportant, but by far the largest number, a want of convenience for the operation. It has become fashionable to add the boilers, pipes, pumps, and rooms to most new houses for the accommodation of bathing. It is generally a somewhat expensive attachment, but is all very well for those who can afford to do it without cutting off other conveniences, or embarrassing other of their affairs. A bowl of soft water, a little soap, and a couple of towels, after all, is all that is *really* necessary. A small room is pleasant and convenient, and may be found in most dwellings without expense particularly for it. In the *Farmer and Mechanic*, published by Messrs. PARKER & BIDWELL, New York, we always find sound and useful instruction, and among many other good things, what follows, in relation to the functions of the skin :

"A knowledge of the various and important offices performed by the skin, in the animal economy, must quicken our attention to bathing, as the best means by which health may be preserved without disturbance or interruption. There are three substances passing from the skin constantly : 1st, an oil exudes for the benefit of the skin itself; 2d, the perspiration, or water portion of the blood, evaporated from the surface to cool the body; 3d, excreted substances of varying character, very injurious to health if not carried off. These substances are very liable by drying to form a gum or glazing upon the surface of the skin, which closes the millions of pores, damages the nervous system, and throws the excretions back upon the lungs. By bathing all these impurities are removed and the skin rendered soft and readily adapted to preserve the proper adjustment between the secretions and exhalations; and more especially assist the respiratory functions of the human body."

Now, kind reader, that thou seest what important duties the skin has to perform, in order to keep thee elastic and in health, wilt thou not attend to its demands, and straightway go and bathe, and do it habitually?

A NEW LAMP.—The lamp to which we alluded a few weeks since was invented and has been patented, by Dr. CHARLES SEEDHOR, of Lancaster, Mass. We know nothing of it beyond what was stated in the paragraph published. This paragraph is written to answer inquiries in relation to it.

Some time since we published a table giving the time of gestation of certain animals, in which a typographical error of the figure 8 was inserted instead of the figure 9, making the time of gesta-

tion of the cow eight months instead of nine. The error was so obvious that we did not deem it worthy an erratum. But, it seems that one of our neighbors, who is something of an old Buck himself, is in serious doubts whether it is eight or nine months, so we state decidedly, that, ever since it has been found there are calves who go on *two* legs as well as on four, the cow *does* go with young about nine months, more or less.

For the New England Farmer.

DRY WEATHER:

—OR—

SOLEMN WORDS ON A SOLEMN SUBJECT.

BY J. G. HOTT.

MY DEAR BROWN:—What shall we do! The Scripture—"the heaven that is over thy head shall be brass and the earth that is under thee shall be iron; the Lord shall make the rain of thy land powder and dust"—is finding its fulfilment among us, Gentiles, in the southern district of New Hampshire. Such a drought, as is now withering every green thing before it, has never been known in this region even by the *father* of "the oldest inhabitant." Dame Partington might now "mop up" almost any of our rivers, whatever may have been said about her attempts on the Atlantic Ocean. The noise of wheels and saws has ceased; "the sound of the grinders is low;" mill-ponds have evaporated and left their fish as dry as smoked herrings. Not a few trees on light land, transplanted this spring *without mulching*, have been seasoned for some time as thoroughly as last year's bean-poles; and in others, which maintain a semblance of life, the sap circulates just about as briskly as the blood in Palmer's wooden legs. The foliage on many large and old trees even is beginning to droop and grow yellow. Potatoes will not, as a general thing, be able to rot, for the simple reason that the tops have not had for several weeks sufficient strength to stand up long enough to be "struck" down, and the tubers are too small to be worthy of the notice of a respectable epidemic. The corn in many places is ruined "past a' remead," as in the severity of the drought the tassel was killed before it could develop pollen enough to impregnate the silks; and each particular silk, as you know, is a kind of Fallopian tube leading to the ovum of a kernel. There may be cobs, therefore, but precious little corn on dry land.

With the exception of an abortive effort to storm a week or two ago, we have had nothing but "a hot and copper sky" since the equinoctial rains. The manure, which some of our farmers were unwise enough to put in their potato-hills, has not been wet this year, and to all human appearance is not likely to be wet very soon. The earth and atmosphere have become so dry and hot, that it is a matter of some doubt with me, whether, in accordance with the established laws of nature, it *can* rain now. Red hot iron, it is well known, cannot easily be wet by endeavoring to sprinkle it, because the water is at once converted into vapor and scattered to the winds. It never rains on the great African Deserts, because the clouds no sooner come within speaking distance than they are dissipated and dissolved "into thin air" by the heat, which is always rising from the burning

sands. It is on this same principle that I am getting to be skeptical as to the possibility of its raining any more on our parched and blistered fields. At any rate, I should like to see it try, even though the result should prove the destruction of my theory of Natural Philosophy.

I rode off yesterday with a friend into some of the neighboring towns, but the dust both followed us and went before. Whatever else may be said of nature, it is certain we could not "see anything green" in her. The cry came up to us from all sides, like a Round,—

"Fire! fire! pour on water."

Kensington, one of the best farming towns in the State, looked like the old *Ætna*-scorched *Empedocles*, "all blossomed out with blisters," as *Menippus* hath it. The hills were all "done brown," and the valleys were sizzling like a mackerel on a gridiron or the eye of old *Polyphemus* with the hot stake in it. The cattle were hunting for grass with doubtful success in frog-forsaken marshes and in the channels of defunct rivers.—We noticed a Devon bull, gnawing a hassock in a swamp, whose bright red color was bleached out by the sun into a dirty yellow; and not far off an old mare, standing in the shade of a great rock, whose original glossy black had in the glaring light faded into a kind of dingy olive brown.

The apple trees, however, are an exception to the general rule of desolation and barrenness.—*Baldwins* are abundant, and *Rhode Island Greenings* are by no means "slow." The extensive nursery of Mr. William Hall, one of the most intelligent and gentlemanly nurserymen in New England, has been sending out all this region for quite a number of years great quantities of the choicest fruit-trees of every kind and variety; and they are now speaking well both for their origin and their cultivation. Mr. Hall himself has an acre of land which he purchased some eleven years ago for \$75. One-half of this acre is covered with an orchard, which he set out and grafted, and from which he will undoubtedly gather this fall, besides a good many bushels of the *Summer Rose* and *Early Harvest*, not less than 100 barrels of winter apples selected for the market. These will probably be worth on the tree \$1.50 per barrel, or \$150.00 in all—a pretty fair dividend on the first cost. It requires but little mathematics to see, that 200 per cent. is some better than even "one per cent. a month." It should be remembered, too, that these trees have not yet developed half their capabilities.

The greenest farm we saw on our route, was one in Bradford, which took last year, I think, the first prize in *Essex County*. It is owned and managed by Mr. Wm. F. Porter, who is manifestly "up and dressed" and takes the "morning papers." His barn is a model in itself and in all its appendages. A man who has any intention of erecting a building of this sort, would be warranted in going as far to see this barn as *Hume* said he would go to hear *Whitefield* preach—a distance, between you and me, which I do not now exactly recollect.

By the way, this same old town of Bradford is beginning to exhibit a good deal of taste, not only in its barns, but also in its houses and grounds. The residence of Dr. Coggeswell, and two mansions recently erected, one in the style of the *Elizabethan* age, are very good specimens of architectural beauty and convenience. We looked at them

through our tears; for we thought of him, the artist, the scholar, the man of cultivated and elegant taste, who has done so much to humanize our uncouth homes, and who has recently been "snatched from a sphere of high and beautiful utility." Poor *Downing*! killed, ruthlessly, wickedly killed in his prime, he has yet left behind him something more than

"A solitary shriek—the bubbling cry
Of some strong swimmer in his agony."

The monuments of his genius and industry are scattered all over the land, from the national Capitol to the humblest poor man's home. Not an elegant edifice rises by the way-side, not a country-house smiles through the trees in the green fields, which does not suggest the author of "*Rural Cottages and Cottage Villas*." Not a shade tree shelters the children on our lawns or spreads grace and health about our dwellings, which does not in every waving branch speak of him whose life was animated with the one "wish to inspire all persons with a love of beautiful forms and a desire to assemble them around their daily walks of life." Not a fruit tree bends under its "rich, bloom-dusted, melting" burthen, which is not fragrant with the memory of *Downing*. Not a garden or an orchard, which is not as intimately associated with his name and fame as *Kenilworth Castle* is with *Walter Scott*, or as the brook of *Avon* is with *Shakspeare*. A beautiful immortality even in this world! How truly in his last moment might he have appropriated to himself the confident language of *Horace*—

"Non omnis moriar; multaque pars mei
Vitat Libitinam."

"I shall not all die; over no small part of me death shall have no power."

In an ancient-looking grave-yard in Bradford, among other notable things we found a row of six tomb-stones standing in memory of six of the seven wives of the late Hon. *Nathaniel Kimball*. The first wife, *Betsy*, died Nov. 25, 1790, aged 34 years; the second, *Martha*, died May 12, 1799, aged 32; the third, *Huldah*, died Sept. 8, 1801, aged 24; the fourth, *Clarissa*, died Nov. 14, 1803, aged 36; the fifth, *Martha B.*, died July 27, 1804, aged 25; the sixth, *Mary*, died March 3, 1808, aged 27. The last wife, whose name is not yet written in marble, proved too much for the disconsolate husband, and so he died at the early age of 56, probably of blighted hopes and a broken heart. He is represented as a person of some distinction in the political world, a good butcher by profession and an exceedingly agreeable and industrious man. This last trait of character is sufficiently obvious, perhaps, from the prompt and business-like way in which he despatched so long and formidable a list of wives. Very few men have had the melancholy privilege of following to their graves six wives in seventeen years; fewer have been "in at the death" of four in five years; and fewer still have turfed over two in eight months and thirteen days!

"Thrift, thrift, *Horatio*! the funeral baked meats
Did coldly furnish forth the marriage tables."

But as my meditations among the tombs are taking an unfavorable turn, I will leave the old grave-yard and my grey goose quill at the same time.

Yours truly,

J. G. H.

Exeter, August 19, 1852.

NECESSITY FOR PURE AIR.

Dr. Southwood Smith says, "that when we inspire air, it goes to the lungs loaded with oxygen; but when we expire it, it returns loaded with carbonic acid." Carbonic acid being heavier than common air, does not pass off readily, but settles at the bottom of our rooms, churches, &c., where we are quite likely to breathe it over again unless there is opportunity for a free current of air through the apartment. Carbonic acid, this breath that we expire, and which also comes from other sources, is the gas that settles in the bottom of wells, vaults and cellars, and sometimes destroys life when persons descend into them. A case has just occurred where three men were suffocated in this gas in attempting to clean out a well. As flame is not supported in this gas, nothing is easier than to ascertain whether the well is foul, by lowering a lighted candle or a lamp to the bottom. If it continues to burn freely, there will be no risk from foul air in descending, but if it burns languidly or is extinguished, it will be unsafe to go down. In the latter case, drop quick lime into the well and pour over it water from the watering pot. On lowering the candle again, after a few minutes have elapsed, it will be found that it will burn, and the danger of descending obviated.

The collection of this acid, then, is by the unvarying law of gravitation,—and we must ever have it with us in confined situations. How important it becomes to have all our apartments well ventilated, and to drink in at each inspiration the life-giving air, with all its parts justly tempered by the great chemist who rules it at his will!

For the New England Farmer.

EARLY KENT PEAS—ASPARAGUS.

A writer in a former number of the *Farmer* expresses the opinion that the Early Kent does not require brush to run upon. It is elsewhere declared in your journal that this is the best early pea generally cultivated in the vicinity of Boston. I believe the seedsman of Messrs. Ruggles, Nourse, Mason & Co. is responsible for that opinion. I planted this season ten square rods of early peas, say six rods to Early Junes and four to Early Kent. The spot was a hill-side, sloping to the south-east, a rich gravelly loam for surface soil, and yellow loam for sub-soil. It was cropped the year before with peas, celery, melons, squashes and turnips. The latter were manured with superphosphate of lime (bones dissolved in sulphuric acid.) The ground was thoroughly spaded and manured in March, and the last of the month the peas were sowed. They were all brushed except a single row of the Early Kents. The seed was procured of the above seedsman, and gave a growth of vines five or six feet; nearly as large as the early Junes. Whether so stout vines require brushing hardly admits of a question. The row that went without brush fell flat, and as the under side was cut off from air and sunshine in a good measure, the pods could not mature as perfectly as if they had enjoyed these favors. I shall not need to try the experiment

again. They were three or four days earlier than the Junes, and the pods were a little larger, but not quite so numerous, according to the best judgment I could form. I did not test the comparative yield of the two kinds, but the whole product of the 10 square rods was 17 bushels, which sold readily at one dollar and a half a bushel. This gives \$408 for one acre, and clears the ground in time for a second crop. Can our farmers, who live near a market, do better than to plant a pea patch?

Asparagus a Marine Plant.—I see a Lancaster friend has started a new inquiry entirely. One might suppose that the enormous quantity of salt which this plant will appropriate, were pretty good evidence of its marine origin. But there is nothing like facts to establish a theory. If Mr. Siedhof will give us a call, we will show him ocular demonstration that it grows wild by the sea. Some ten years ago, in crossing Shelter Island, in going from Greenport to Sag Harbor, L. I., I remember to have found this plant in the edge of a marsh. A neighbor of mine affirms that it grew all about the shores of Mason's Island, in the mouth of Mystic River, and that he could pick enough of it for a dinner in a half hour. Others affirm that it grows wild near the marshy shore of Quantico, and that it may also be found in similar situations in Oxicoet, in this town.

As to its location on the high lands in Germany, it is perhaps to be accounted for in the same way that we account for clam shells and other marine deposits on similar hills and mountains. The uplifting of a clam bank by any force within the earth, would be likely to take along the neighboring asparagus bed with it. W. CLIFF.

Stonington, Ct., Aug. 4th, 1852.

REMARKS.—The *Encyclopedia Americana* says that asparagus grows wild on the pebbly beach near Weymouth, England, and in the island of Anglesea; but its stem in these situations is not usually thicker than a goose quill, and its whole height does not exceed a few inches. A lady informs us that she has seen it growing on the shores of Long Island, and that it is gathered from localities in that region, and sold in the New York market. When Mr. Siedhof rambles with you along pleasant places on the seashore, "may we be there to see," and hear, also! Our heart vibrates towards each, and longs for a fuller and freer communion.

For the New England Farmer.

APHIS AND ANTS.

As the operations of these insects upon my trees have caused me considerable trouble and anxiety, the article in relation to them, in the *Farmer*, of July 24th, was to me very interesting. I should like to know the opinions of the editor, and of Prof. HARRIS on the Theory of "Huber," alluded to in the following article, published in the *Albany Cultivator*, for March, 1844.

"APHIS OF THE CHERRY TREE.—Huber, in his account of the ants of Switzerland, says there are some species which obtain their principal food from the honey-like substance that is excreted by the aphid—that the ants watch, tend, and keep the aphid for its honey, as men do cows for their milk.

I have not, by any direct observation of my own, been able to verify this fact in reference to our American ants. Mrs. Darling, on one occasion, had the good fortune, on raising a flat stone in the spring, to see the ants pick up and carry off the aphides, which had been housed for the winter in the same habitation. I have no doubt, therefore, but that our ants are, as Huber expresses it, a 'pastoral people,' as well as those of Switzerland. It is quite probable that the aphids of the cherry tree, in particular, is domiciled with the ants in the winter, and in the spring as soon as the leaves are unfolded, is carried by the ants to the trees, where it finds pasture for the summer. It rather confirms the supposition, that when the cherry aphids first makes its appearance in spring, it is on leaves very near the ground. I have had occasion to turn this fact to account, in preserving my young cherry trees from this destructive insect. . . . Peach trees which have been tarred in the spring for protection against the borer or peach worm, are never infested with the aphids—I suppose because the ants cannot carry the aphides up the trees over the tar. . . . —*Noyes Darling.*

In your own remarks, Mr. Editor, in reply to the inquiry of "Mount Grace," or in the remarks of Prof. Harris upon the subject, I see nothing at variance with the theory, that these insects are the ants' "cows," watched, tended, and kept for their milk, or honey-dew; that they are kindly housed in winter by the ants, and in summer taken by them to pasture. If there is as much truth as poetry in this theory, "Mount Grace" will no longer wonder that his disturbing their well arranged dairy operations, should have aroused the belligerent spirit of the industrious ants, nor that they should be willing to fight in defence of their herds and pasture-fields.

S. F.

Winchester, Aug., 1852.

STATE FAIRS FOR 1852.

The following is a list of the Agricultural Fairs to be held, during the coming fall, in various sections of the Union:—

Vermont, at Rutland.....	September 1, 2, 3.
New York, at Utica.....	September 7, 8, 9, 10.
Ohio, at Cleveland.....	September 15, 16, 17.
Michigan, at Detroit.....	September 22, 23, 24.
Canada West, at Toronto.....	September 21 to 24.
Indiana, at Indianapolis.....	October 19, 20, 21.
Pennsylvania, at Lancaster.....	October 20, 21, 22.
Wisconsin, at Milwaukee.....	October 6, 7, 8.
New Hampshire, at Meredith.....	October 6, 7, 8.
Georgia.....	October 18 to 23.
Maryland, at Baltimore.....	October 25, 27, 28, 29.
Am. Pomological Congress, at Philadelphia.....	Sept. 13.
American Institute, at New York.....	October 5.
American Ins. Exhibition of Stock.....	October 19, 20, 21.

MEETINGS OF COUNTY SOCIETIES.

The following list gives the days upon which the several Agricultural Societies in this State hold their respective meetings:—

Essex.....	Wednesday and Thursday, Sept. 29—30.
Housatonic.....	Wednesday and Thursday, Sept. 22—23.
Franklin.....	Wednesday and Thursday, Sept. 22—23.
Worcester.....	Thursday, September 23.
Hampden.....	Thursday and Friday, Sept. 30 and Oct. 1.
Norfolk.....	Wednesday, September 29.
Worcester, (West).....	Thursday, September 30.
Middlesex.....	Wednesday, October 6.
Berkshire.....	Wednesday and Thursday, Oct. 6—7.
Plymouth.....	Thursday, October 7.
Barnstable.....	Wednesday, October 13.
Hampshire, Franklin and Hampden.....	Oct. 6—7.
Bristol.....	Thursday, October 14.
Hampshire.....	Wednesday, October 20.

For the New England Farmer.

SWALLOWS—DROUGHT—APPLES.

EDITOR NEW ENGLAND FARMER:—Sir,—Your article in a late number of your paper in regard to the swallows, I think will not apply to this region, as they are quite plenty here at this date. You stated that they left almost invariably the last days of July. Do you think a hundred miles' distance makes two weeks difference in their departure? (a.) The crops in this vicinity have suffered some from drought, but are generally good. Apples are quite abundant.

Yours, &c.

C. M. L.

New Britain, Aug. 16, 1852.

REMARKS.—(a.) No. Is C. M. L. confident that the barn swallow was at New Britain on the 16th of August? Was it the swallow with a steel-blue band on the breast, and the same color on the back; front and beneath chestnut-brown, puler on the belly; tail long forked, with a white spot on the lateral feathers, the outer ones narrow and long? It is important to notice the difference in the birds, as there are some seven or eight kinds of swallows, appearing and retiring at different times, five of the varieties being common in Massachusetts, and probably all over New England. We have not seen a single barn swallow now for more than ten days, [Aug. 18,] and but a few of the white-bellied, who were diligently feeding their young and preparing them for their southern flight. We are happy to find that attention is turned to these lively and interesting birds. The farm is a perpetual museum, containing numberless specimens of the most beautiful creations. It ought not to remain sealed and unobserved to any. The swallow tribe has arrested the attention of the wise and good through many ages. As far back as the time of Anacreon, it was observed and elegantly described by him in his 33d ode.

"Lonely swallow, once a year,
Pleased you pay your visit here;
When our climes the sunbeams gild,
Here your airy nest you build;
And, when bright days cease to smile,
Fly to Memphis or the Nile."

TO PRESERVE GIRDLED TREES.—In the April number of the *Farmer*, page 129, J. H. L., of East Charlemont, Mass., inquires if any of your correspondents know how to preserve trees that have been girdled. Tell him to take out a block of wood extending into the bark above and below the girdle, and take from the body or limb of another tree a block corresponding in size and shape, with the bark on, and adjust it in the place, and bind it there, on the principle of engrafting. I have recommended this plan before, and it has proved completely successful.—C. MOORE, Port Clinton, Michigan.—*Genesee Farmer.*

THE LATEST LABOR-SAVING MACHINE.—It is said that a Yankee has invented a potato digging machine, which, drawn by horses down the rows, digs the potatoes, separates them from the dirt, and loads them up into the cart, while the farmer walks alongside, whistling "Hail Columbia!" with his hands in his pockets.—*Boston Journal.*

HEREFORD BULL.

The Herefords take the name from the county in which they originated. The oxen of Herefordshire are much larger than the Devon, and of a darker red; some are dark yellow and a few brindled; they generally have white faces, bellies and throats. They have thicker hides than those of Devonshire, and they are more hardy, and shorter in the carcass and leg; are higher, heavier, and broader in the chine; have more fat, and are rounder and wider across the hips; the thigh is more muscular, the shoulder larger. This is nearly Youatt's description. Marshall, a good judge, long since described them with favorable opinions. The oxen fatten rapidly at an early age. This breed is not now much used for husbandry, though it seems doubtful whether the Devons or Short Horns are any better in the yoke than the Herefords.

The Hereford cow seems to be considered on all hands as an inferior animal. Youatt states that while there are many dairies of Devon cows in various parts of the country, a dairy of Herefords is rarely to be found. The Devons and Herefords have been mixed, and the breeds of both improved.

We are under obligations to the Hon. AMASA WALKER, Secretary of the Commonwealth, for a few copies of the Transactions of the Agricultural Societies of this State for 1851. It is a large and beautifully printed volume, and filled with reports of experiments by the practical farmers of the State, brief extracts from the annual addresses, &c., &c.

He has also placed in our hands a few copies of

his Synopsis of the communications on the cause and cure of the Potato Rot, received by the Executive of the State. These copies we shall be happy to hand those persons who have made inquiries for them.

We would also express our obligations to the Secretary for a correct report of the proceedings of the first meeting of the State Board of Agriculture, which may be found in another column.

For the New England Farmer.

A NEW DEPREDATOR.

S. BROWN, Esq. :—Dear Sir,—As I was walking in a pasture the other day, I saw an old gentleman under an oak tree. I walked up to him and found the ground completely covered with boughs. What do you suppose ails that tree, said he. I told him I supposed there had been some high winds which broke them off. He said he supposed it was the locust. But I soon convinced him of his error; I took a branch and examined where it was broken off, and found that some insect had entered the bark and cut the wood completely off as smooth as though it had been sawed off, and then ascended the branch through the pith. I followed the excavation till I came to a borer varying from one-half to three-fourths of an inch long, resembling the apple tree borer, but of a darker color. On continuing my walk, I found that small trees as large as my thumb were broken off three feet from the top, by the same agent. As I am a green hand, as you will perceive by this communication, I wish you would communicate some light on this subject. E. M.

Sherborn, July 26, 1852.

REMARKS.—We have observed the same mischief done on our white oaks, but in the midst of pres-

ing engagements have had no opportunity of following this new *sawer and borer*. A month since, a gentleman brought us the top of an apple tree, three-fourths of an inch in diameter, sawed off as smoothly as though cut with a fine saw. The borer has long been a destructive operator at and near the roots of trees, but this neighbor seems to have introduced a new department into his operations—that of *sawing* as well as *boring*. Well, *patience* is a virtue, and the farmer must lay up a good stock of it to begin with, and then if he can coax away these *mechanics* to forage upon something less valuable than his oaks and apple trees, he will be the gainer. But we cannot enlighten him in relation to these new tactics, and must call upon some of our friends for aid.

For the New England Farmer.

SULPHATE OF LIME, (PLASTER, GYPSUM.)

ON WHAT SOILS TO BE USED—FOR WHAT CROPS—THE PHILOSOPHY OF ITS ACTION.

BY J. A. NASH, MT. PLEASANT SCHOOL, AMHERST.

The use of plaster is one of the most valuable conquests of modern agriculture. Its use was commenced some ninety years ago. Mr. Mayer, a clergyman of Switzerland, published his experience in the use of it in 1765. Its use soon spread through Germany, France, England and America; and is now general, though not as much so as desirable, in all these and many other countries.

Dr. Franklin recommended its use by the following stratagem. Wishing to demonstrate its good effects, he wrote on a clover field, near a travelled road, in the vicinity of Washington, by means of powdered plaster, spread in the form of mammoth letters,—"This has been plastered." The words could be read distinctly, at first, by the whiteness of the gypsum, but after a few days, and thence till harvest time, by the deep green color and the superior growth of the crop.

Dr. Franklin's device took good effect. Large quantities of plaster were soon ordered from Paris. Its good effects were established by repeated trials. Subsequently it was obtained in great quantities from Nova Scotia; and more recently, it has been found abundantly at various localities in our own country.

That the use of plaster has been, on the whole, highly beneficial, there is no room for doubt. But it is equally certain, that for some crops, and on some soils, it has not proved remunerative.

Were plaster to be used indiscriminately on all soils and for all crops, the gains consequent upon such use would be great, on the one hand; but it cannot be denied that the losses, on the other, would be considerable, and would fall, in most cases, on those who cannot well afford to bear them. It is therefore a matter of no small importance, to ascertain the precise nature of its action on soils and crops, in order that we may arrive at such discriminate use of it, as to secure its benefits without the risk of losing the money paid for it. No loss is more to be guarded against, than that of the hard-working farmer, paying his money for fertilizers which make him no return.

That the use of plaster is on the whole benefi-

cial; that its hitherto indiscriminate use has produced more gains than losses; that there have been more hits than misses; or in other words, that farmers have *guessed* right oftener than wrong, is pretty certain. But beyond this, nearly all is uncertain. Ask practical farmers on what soils plaster works well; for what crops it is best adapted; how, when, where and in what quantities it should be applied, and they will either tell you nothing, or they will so far disagree, that you will not know which to believe.

If you consult scientific men, you will get plenty of answers; but neither will their testimony agree. They would gladly give you a true and safe directory, if they could; for scientific men are fast comprehending their obligations to aid practical agriculture; but hitherto they have been unable. Let us not infer from this, that these pioneers in science have done nothing for agriculture. We might as well say that Newton accomplished nothing for astronomy, because he left some things for his successors, men inferior to himself, to discover. Science has done much for agriculture; and it will yet do more; though it must be confessed that on this subject we are yet in the dark; and about all that the cultivator of the soil yet knows, is, that when he pays his money for plaster, he puts it into a lottery in which the prizes are somewhat more than the blanks.

I do not write with the expectation of removing all doubt on this important subject. I have not the vanity to believe that I shall compass the whole truth and nothing but the truth. It would be strange if I should wholly escape all, which further investigations may prove erroneous.—Should any or all the views I am to present be condemned, I shall be satisfied if their presentation shall elicit truth from abler pens.

It is evident that plaster succeeds better on some lands than on others; that on those on which its action is favorable, it succeeds better with some crops than with others; and that where the requisites of soil and crop are met, it succeeds better with one than with another mode of application. Something also is to be said of the quantity to be applied.

Some things there are to be considered, the soil, the crop, the mode of application and the quantity.

1. On what soil does plaster succeed? Farmers must answer this question. A few weeks since I rode some two miles to consult one, who, I had heard, was an eminently successful farmer. I said to him I have read theories enough; I have heard too many opinions; I want you to tell me what you *know*. He told me that his whole farm was, as I should perceive, a moderately clayey loam, all of it clayey to some extent, some portions highly so, and that plaster did well on every foot of it. He assured me that thirty years ago a very large pasture, on which we were then walking, was so unproductive as to be hardly worth fencing; that it had since received from 80 to 100 pounds of plaster a year, and had produced well the whole time; and now, said he, you see what it is; and sure enough I did. The white clover would almost tempt one of the human species to get down on all fours, and partake it with his fine Durhams. Nor were these fine animals so few as to create the suspicion that the owner understocked for the sake of displaying a richly dressed pasture.

Here was something which the man *knew*, and could prove. I consulted other farmers on similar soils; their testimony agrees essentially with his; I compared the best writers on this point, and came to the conclusion, that *plaster, if applied to suitable crops, will do well* on clayey loams. From the example just given, and from scenes of others tending to the same conclusion, I believe that these soils are not exhausted by its frequent and long continued use, if a good share, say half or more, of what is taken off, is returned again to the soil.

By a similar process of reasoning, I arrive at the conclusion that ordinary loams, light loams and sandy soils even, admit the favorable action of plaster, and are not exhausted by its use, if kept reasonably supplied with organic matter, and with those other salts on which crops partly depend.

Plaster of course cannot be of much use on lands already containing sufficient of its elements, sulphuric acid and lime. Enough is as good as a feast; and if the soil contains enough of these ingredients, we need not add more.

It has been observed by many practical farmers, that plaster produces little effect on lands that were originally timbered with beech, maple and birch. I know not whether this is true; nor, if true, can I assign a reason, unless it be, that upon the removal of such timber from land, the soil is left with a sufficient quantity of plaster in it for many years. If the observation be founded in truth, and if the reason I have suggested be the true one, it follows that sooner or later the time will come, when plaster will operate favorably on these lands; for if beech, birch and maple lands contain an abundance of the elements of plaster, upon the removal of the timber, yet it may be exhausted, and when exhausted may need to be re-supplied as other lands. To me it seems quite possible, probable even, that there are lands in one state, on which the use of plaster was condemned, and with good reason, ten years ago, but on which its use would now be highly beneficial.

There is reason to believe, as we shall hereafter see, that a portion of the lime in plaster, in consequence of a change which it undergoes in the soil, acts simply as lime, both in decomposing organic matter in the soil and in furnishing the plant with a portion of its food. If so, it follows that plaster cannot be very efficacious on lands that contain abundance of carbonate of lime, unless in favor of a few particular crops, which require much sulphuric acid. Calcareous (limy) soils, with such exceptions, cannot therefore be expected to exhibit any decidedly good effects from the use of plaster.

In order to the favorable action of plaster on any soil it must either be naturally dry and warm, or it must have been made so by draining. It is worse than useless to plaster cold, wet lands.—They are only made colder and wetter by the operation.

If, then, we except lands infested with water, those sufficiently furnished with the elements of plaster, perhaps all lands in which beech, birch and maple were the last growth of timber, and partially those abounding in lime, it may be laid down that all lands, of sufficient consistency to deserve the name, admit the favorable action of

plaster, if the land be fairly dealt with, that is, if it be duly supplied with organic matter, and with such other salts as plants require. These latter conditions are indispensable. It would be as unreasonable to expect your land to produce well, by plaster alone, as it would to expect your horse to be made strong to work, on water alone, when it is plain that he requires grain and hay as well as water. Plaster is good, but it cannot do every thing for the soil, any more than water can do everything for the horse. Men have neglected to furnish the soil with other essentials of productiveness; have omitted essential conditions of success; have expected plaster to do everything; and because it has not done everything, or, if it literally did everything for a few years and then refused to do it forever, they blame it as doing nothing, or at best as doing nothing after a few years, and leaving the soil exhausted.

2. What are the crops for which plaster succeeds? The general answer is, those which contain in their compositions a large amount of the elements of plaster, sulphuric acid and lime. A crop which contains a large amount of both these elements, may be expected to be greatly benefited by plaster; one that contains a large amount of one and considerable of the other, in a less degree; and one that contains little of either, still less.

Let us now see what crops may be expected to succeed by the aid of plaster on these principles. An ordinary crop contains, per acre, as follows:—

	Sulph. Acid.	Lime.
Wheat.....	0.44	8.88
Oats.....	5.80	12.00
Rye.....	2.74	16.00
Barley.....	4.80	15.60
Broom Corn.....	2.66	1.90
Rice.....	5.93	1.82
Buckwheat.....	0.59	1.14
Timothy.....	6.19	0.90

The foregoing crops, containing but little of the elements of plaster, we should not expect them to be very greatly benefited by its application. If applied, it may be of some benefit to them, but would be likely to benefit a clover crop, which might follow, far more. The idea I wish to convey is, not that plaster is of no use for the foregoing crops; nor that under peculiarly favorable circumstances it might not be of great service, but that as a general rule, if applied to these crops for their sake alone, without any reference to succeeding crops, it cannot be relied upon to give a profitable return; that it is not the appropriate dressing for these crops.

We now turn to a class of crops which contain of the elements of plaster, as follows, per acre, omitting fractions:—

	Sulph. Acid.	Lime.
Pean.....	.82	190
Tobacco.....	10	106
Hemp.....	6	194
Flax.....	8	61
Indian Corn.....	29	13
Red Clover.....	2	43
White Clover.....	3	43
Beans.....	2	37
Hops.....	20	180
Beets.....	91	110
Carrots.....	115	191
Potatoes.....	50	29
White Turnips.....	78	107
Cabbages.....	56	14
Meadow Hay.....	31	74

Our principle would not require us to believe that these crops would be benefited equally by plaster. An inspection of the last table might lead to the conclusion that some of them hardly belong

to the class in which I have put them, while others seem, by the very large quantities of sulphuric acid and lime contained in them, to be peculiarly plaster crops. With regard to all or nearly all of them, I believe that the results of experience accord with the conclusion to which I am led by an inspection of their elements;—that they are essentially benefited by the application of plaster.

3. From 80 to 100 lbs. of plaster are often named as a suitable quantity to apply per acre. If this quantity were doubled, and then increased still more in favor of those crops, which contain very large quantities of the elements of plaster, there would seem to me to be more wisdom in the prescription, though I believe Liebig has shown, and experience has confirmed, that something like 100 lbs. per acre is a suitable dressing for pasture lands. It should in no case be regarded as a substitute for manure. If the cattle did not manure their own pasture, it would be in vain to plaster it. So far from its taking the place of ordinary manure, it is true that the more manure is put upon land, the more plaster may be used advantageously. As an animal cannot thrive on water, as a substitute for food, but will drink about in proportion as he feeds heartily; so the land will not be satisfied with plaster alone, but will repay the owner for putting it on, about in proportion as it is well provided for in other respects. Hence I apprehend that no rule but that of common sense, pretty well informed, can decide how much plaster should be applied in any given case.

4. As regards the manner of applying plaster. It has by many been thought best to sow it in the spring, in a damp atmosphere, that it may adhere as much as possible to the stalks and leaves of the young plant. This opinion seems to be founded on the belief that its virtues are absorbed by the leaves, which I believe to be erroneous. Too much importance seems to have been attached to the application of plaster to the moistened leaves of plants. It may be well to apply it thus on pastures and on mowings, not to be otherways manured the same year, as it will be less liable to be blown away by the wind; but when its application is to be made on tillage or on mow lands, that are to receive other manure the same year, it seems most reasonable to believe that it should be composted with the manure, for the double purpose of retaining its nutritious gases, and then at the proper time of feeding the plants on its own elements.

Having arrived at the conclusion that plaster is beneficial on nearly all lands, if kept otherwise in good condition; that it is especially useful for those crops which contain much of its elements, and less so to others; that the quantity is rather to be decided by a consideration of the crop to be raised, the amount of manure used with it, and the known susceptibility of the soil to be benefited by plaster, than by any fixed rules, varying from one to two or three hundred pounds per acre; and that it may well be applied to the young plants in a moistened state on pastures and on mowings not to be manured the same year, but in other cases may better be composted with the manure and with that incorporated into the soil, I come now to inquire into the philosophy of its action—how it operates on the air, the soil and the crop? Here, fortunately, we have opinions enough, but unfortunately they differ widely.

Messrs. Girardin and Breuil, authors of an elab-

orate treatise on agriculture, say:—"It has been said, and many farmers yet believe, that the good effects of plaster are due to its gathering moisture from the air and hastening, by means of its lime, the decomposing of organic matter in the soil.—But these opinions," they add, "are altogether erroneous, since this salt possesses neither of these properties."

Now, for the naked fact, that plaster, in its unchanged state, as it enters the soil, possesses neither the property of attracting moisture, nor of decomposition of organic matter into available food for plants; the authority of these very able writers is undoubtedly above suspicion. But in its transformations in the soil, it may, and, I believe, does possess these properties in a high degree.

It is well known that one of its constituents, sulphuric acid, attracts moisture. Many a rogueish dealer knows full well that in order to have his carboy of sulphuric acid hold out like the widow's cruise, he has only to leave the stopper out. Although this acid, when combined with lime in the form of plaster, may not possess the property of attracting moisture, yet on its separation from the lime it may, and probably does rejoin this, its original property—may exercise it in its transition state, and retain it in its new combinations.

Lime also, though not decomposing organic matter, while combined in the form of plaster, may repossess itself, when let loose from that combination, of its original property of hastening the decay of all that it touches. Who does not know that the sill of a building, if embedded in lime mortar, will soon rot? and that lime greatly hastens the decomposition of organic matter in a compost heap? If this, then, is a well known property of lime, when not combined with sulphuric acid, may it not resume this property at once on being discharged from that combination? May it not exercise it on the organic matter of the soil, while in transition at least, if not in its new combinations?

The popular belief is, in this case, founded in truth. You cannot make an observing farmer believe, but that plaster attracts moisture, and that the lime it contains hastens the conversion of dead matter in the soil into living organizations. This is the popular belief. It is deduced from long observation. Many a farmer has adopted it, not because he has heard of it, but because he has seen it. Plaster, by means of its lime, prepares food for plants out of inert matter; and, by means of its acid, it gathers moisture from the air and from deep in the subsoil, and retains it for the use of plants. Upon this last point, Messrs. Girardin and Breuil themselves help us on, for in another part of their very able work they tell us that plastered lands will stand a drought much better than unplastered. Why is this, unless plaster attracts and holds moisture?

Liebig believes that the good effect of plaster consists entirely in its fixing the ammonia in the soil and in rain water, so as to prevent its escape. He supposes that the carbonate of ammonia in the soil and in falling rain undergoes a double decomposition with the plaster, by which carbonate of ammonia and sulphate of lime become sulphate of ammonia and carbonate of lime. In this, there can hardly be a doubt, he is correct; but in limiting the good effect of plaster to the one office of fixing the ammonia, he must be, as nearly all ag-

ricultural chemists now agree, in error. To change the volatile carbonate of ammonia, more ready to fly away than riches, when they have wings, into a soluble sulphate, and thus to diffuse it through the soil, and to hold it in readiness for the plants, seems to be an important, but not as Liebig thinks, the only office of plaster.

Boussingault thinks that plaster acts purely and solely as lime. He believes that in the presence of organic matter in the soil, it is converted into sulphuret of calcium, and then, by means of carbonic acid in the water surrounding it, into sulphuretted hydrogen and carbonate of lime; and he supposes that the greater value of the carbonate of lime thus formed is owing to the exceeding fineness with which it is divided, so as to be readily dissolved in the carbonated moisture of the soil, and thus to enter the roots of plants as food.

A potent argument for this theory is, that plaster, as a general rule, benefits plants which abound in lime, whether they contain a very large share of sulphuric acid or not. But a fatal objection to the theory, that plaster acts solely as lime, is found in the fact, that it acts most favorably in some plants which abound in sulphuric acid and contain comparatively little lime. Indian corn, for instance, carries off much more sulphuric acid than lime, and yet is confessedly benefited by plaster.

Sir Humphrey Davy's theory amounted to little more than that certain plants cannot be developed in their perfection without sulphuric acid and lime, and that the office of plaster is to feed them with these elements. He would have us ascertain by careful observation and experiment, which are the plants to be benefited by plaster, and to use it accordingly.

There is something peculiar in the views of each of these men. Girardin and Breuil believe that no good effect comes from plaster in the way of gathering moisture or of hastening the decomposition of organic matter. They, in common with Sir Humphrey Davy, believe that plaster feeds the plant on its own elements. Boussingault believes that it acts simply as lime, feeding the plant on this element only. Liebig holds, that acting instrumentally, and not directly furnishing its own elements to plants, it feeds them on ammonia, that is, seizes and holds for their use the ammonia that otherwise would escape.

Partly as guided by these rather discordant authorities, partly led by my own experience, and more by consulting sound, observing farmers, I come to the following conclusions, which, however, I present rather with the hope of eliciting discussion, than with the view that they should be adopted. The adoption of them could afford me no satisfaction, farther than it might operate as an evidence of their truth.

1. In its transformation, and in some or all of its subsequent combinations, plaster attracts moisture from the air and from the subsoil, and so withholds it from evaporation, that the plants can the better endure a drought.

2. The lime of plaster, in its transition and in its subsequent combination with carbonic acid, favors the decomposition of organic matter, and thus hastens its conversion into available food for plants.

3. By means of a double decomposition with carbonate of ammonia, forming soluble sulphate of

ammonia and carbonate of lime in a state of exceeding fineness, it prepares its own elements for reception by the plants, and at the same time saves for their use the ammonia, which would otherwise escape.

If the view I have now taken is correct, the points into which the practical farmer needs to look are these:

1. Whether his land is well drained, or is sufficiently dry by nature? If not, the first action I have ascribed to plaster would be of no benefit, but rather injury. Plaster would either be wholly inoperative, or it would render the land still more wet, cold and sour.

2. Whether the land is supplied naturally or by manuring—by carrying on manure, by the droppings of cattle, or by the plowing in crops with organic matter? If not, the second action I have ascribed to plaster cannot take place. It cannot decompose organic matter, where there is none to be decomposed. Nothing is more certain than that plaster cannot operate well but in conjunction with animal and vegetable manures.

3. Whether his land already contains sufficient of sulphuric acid and lime; or whether, for any other cause, it is of a kind that refuses to be benefited by plaster? This he can ascertain by procuring a chemical analysis; or better, as I think, in the present state of things, by experiment and careful observation. If he try plaster on a particular quantity of land and find its effects good, he may safely repeat the operation on the same, and extend it to similar land.

Before venturing largely in the use of this or any other fertilizer, to which he has not been accustomed, he should ascertain as far as possible what have been its results on lands near and similar to his own. With such precautions there is very little danger of loss from the use of plaster far more extensively than at present it is used.

MASSACHUSETTS STATE BOARD OF AGRICULTURE—1852.

LIST OF MEMBERS FOR 1852.

Members ex-officio—His Excellency the GOVERNOR; His Honor the LIEUT. GOVERNOR; The Hon. SECRETARY OF THE COMMONWEALTH.

Appointed by the Governor and Council—EDWARD HITCHCOCK, Amherst; MARSHALL P. WILDER, Dorchester; NATHANIEL WOOD, Fitchburg.

Chosen by the several Agricultural Societies—

Barnstable County,	Charles B. H. Fessenden.
Berkshire "	Stephen Reed.
Bristol "	J. H. W. Page.
Essex "	John W. Proctor.
Franklin "	James S. Grennell.
Hampden "	Francis Brewer.
Hampshire "	John A. Nash.
Hampden, Franklin } and Hampshire, }	Joseph Smith.
Massachusetts,	John C. Gray.
Middlesex County,	Simon Brown.
Housatonic,	Joshua R. Lawton.
Norfolk County,	Benjamin V. French.
Plymouth "	Seth Sprague.
Worcester "	John W. Lincoln.
Worcester West,	(Vacant.)

FIRST MEETING OF THE MASSACHUSETTS STATE BOARD OF AGRICULTURE.

The members of this Board met at the Council Chamber, in Boston, July 22, 1852, at 11, A. M. Present, all the members of the Board, except Messrs. Fessenden and Gray.

On motion of Hon. J. W. Lincoln,

Voted, That His Excellency be requested to act as Chairman of this Board.

On motion of the Lieut. Governor,

Voted, That the Secretary of the Commonwealth be Secretary *pro tem*.

On motion of J. H. W. Page,

Voted, That the Board now proceed to classify the members according to the conditions of the act establishing the Board.

Voted, That this classification be made by lot.

This being done, it appeared that the members whose term of service expires in 1854 were—

Marshall P. Wilder,	Dorchester.
J. H. W. Page,	Bristol County.
John W. Proctor,	Essex "
Seth Sprague,	Plymouth County.
John W. Lincoln,	Worcester "
(Vacant,)	Worcester West.

Members whose term of service expires in 1855 were—

Edward Hitchcock,	Amherst,
Stephen Reed,	Berkshire County.
Francis Brewer,	Hampden "
Joseph Smith,	Hampden, Franklin and Hampshire.
Simon Brown,	Middlesex County.
Joshua R. Lawton,	Housatonic.

Members whose term of service expires in 1856 were—

Nathaniel Wood,	Fitchburg.
Chs. B. H. Fessenden,	Barnstable County.
James S. Grennell,	Franklin "
John A. Nash,	Hampshire "
John C. Gray,	Massachusetts.
Benjamin V. French,	Norfolk County.

On motion of Col. Wilder,

Voted, That a committee be appointed to consider the expediency of appointing a Secretary, and if they see fit, to submit a name or names of suitable persons for the office, and report upon the duties to be required of the Secretary; and that said committee report at an adjourned meeting of this Board.—Messrs. Wilder, Cushman, Page, Wood and Proctor, were appointed said committee.

On motion of the Lieut. Governor,

Voted, That a committee on accounts be appointed.—Messrs. Cushman and Lincoln were appointed that committee.

On motion of Col. Wilder,

Voted, That a committee be appointed to attend the next annual exhibition of each of the Agricultural Societies in the State, and report to this Board.

The following gentlemen were appointed, viz:—

Mr. Sprague, for	Barnstable Co. Society.
" Proctor,	Berkshire "
" Wilder,	Bristol "
" Hitchcock,	Essex "
" Page,	Franklin "
" Nash,	Hampden "
" Reed,	Hampshire "
" Lincoln,	Hampshire, Franklin and Hampden.
" French,	Middlesex Co. Society.
" Grennell,	Housatonic "
" Walker,	Norfolk "
" Page,	Plymouth "
" Wood,	Worcester "
" Lincoln,	Worcester West Society.

Voted, That said committee be authorized to fill any vacancies that may occur in their number.

On motion of Mr. Proctor,

Voted, That a committee be appointed to select such subjects relating to improvement in Agriculture in this Commonwealth as may be most worthy of attention, and report at an adjourned meeting. Committee,—Messrs. Proctor, Hitchcock, Gray, Brown and French.

Voted, That when this meeting adjourn it be to one fortnight, August 5, from this day at 10 o'clock A. M., at this place.

Adjourned.

For the New England Farmer.

EXHIBITION OF THE VERMONT STATE AGRICULTURAL SOCIETY.

The Annual Exhibition of the Vermont State Agricultural Society will be held at Rutland, on the 1st, 2d and 3d days of September, 1862.

An area of forty acres will be enclosed for the Exhibition,—embracing a large and pleasant grove, fresh running water, intervals and rolling sward land, and suitable structures for the accommodation, without charge, of all persons, whether residents of Vermont or otherwise, who wish to exhibit animals or articles.

Persons honoring the society by their presence on the occasion, will have opportunity for inspecting valuable Cattle, of the various improved breeds; Suffolk, and other breeds of Swine; unrivalled representatives of French Merino, Spanish Merino, German Merino and Saxony Sheep; and Vermont Horses of the Morgan, Messenger, Hambletonian, and other choice stocks, in all their variety and excellence. For the purpose of showing the general style of action and the speed of horses, a well-graded Trotting Course, within the enclosure; will be provided, and special occasions will be designated for trials of action and speed.

A Mechanics' and Manufacturers' Hall of ample dimensions, will be erected, in which all productions in those branches of industry may be advantageously shown. It is designed to give prominence to this part of the Exhibition.

Works of Art and of Taste, Household Manufactures, and the like, will have a suitable place for display.

WILLIAM S. KING, Esq., will address the Society on the afternoon of the first day; Hon. WILLIAM H. SEWARD, on the afternoon of the second day; and speeches may be expected from other gentlemen, at various times during the Exhibition.

Arrangements have been made with all the

Railroads of the State, with the Saratoga and Washington, Troy and Boston, and Ogdensburgh Railroads, and the Champlain Steamboat Company, by which passengers will be carried to and from the Exhibition at one-half the usual price, and Animals and Articles for Exhibition free, at risk of owners.

Extensive arrangements will be made at Rutland for the accommodation of Visitors; and those who may fail to procure lodgings there, will be readily accommodated at the numerous stations on the lines of Railroad centering at Rutland.

Gentlemen from the States, and from the Canadas, are cordially invited to participate in the Exhibition.

Communications may be addressed to J. A. Beckwith, Cor. Sec., of the Vermont State Agricultural Society, Middlebury, Vt.

FREDERICK HOLBROOK, Pres.

J. A. BECKWITH, Cor., Sec.

For the New England Farmer.

A SKETCH OF REMARKS,

MADE AT THE AGRICULTURAL EXHIBITION IN WORCESTER, SEPTEMBER, 1851.

BY J. W. PROCTOR.

MR. EDITOR:—I found in my desk the annexed copy of some remarks that were prepared the last autumn. Perhaps they may be thought worthy to fill a vacant space in your useful paper. If so, they are at your service. If not, you will please return them to me. What has become of the original I know not.

Very truly, yours,

J. W. P.

MR. PRESIDENT:—Most happy am I, to enjoy the privilege of visiting the Exhibition this day, by the Worcester County Society, as the representative of the "Central Board of Agriculture," in the good State of Massachusetts. At present, a voluntary association, for mutual improvement; but which is to be hoped, will so commend itself to the powers that be, or may be, as to be able to act with a good degree of efficiency. As this is the first visit, to my knowledge, made by any one, in this capacity, perhaps I may be indulged, for a moment, in stating, as I understand it, the purpose contemplated by these visits. For *thirty years* or more have there been organizations of Agricultural Societies, in various counties of the State, all having the same general purpose in view, but acting entirely independent of each other, and without any concert of movement. The idea was conceived first, I believe, by gentlemen connected with the enterprising Society in Norfolk County, of bringing about concert of action; and with this view have Delegates been sent out to visit the several Societies and to report what is to be learned. As in the organization of our civil Government, it was soon found, independent associations were good for some purposes, but that "the greatest good of the greatest number" could best be promoted by *united action*—which union has thus far operated to a charm; and it is hoped will be perpetual. So, to compare small things with great, do those who represent these societies, from all sections of the Commonwealth, hope to bring about a co-operation of action, that shall be beneficial to all concerned. Fortunate am I in the privilege of viewing the Worcester model—the fountain from

which I imbibed my first notions of the value of farmers' Cattle Shows. Thirty years ago, or nearly so, in company with my venerable friend Colonel Pickering, I remember to have attended the Cattle Show in Worcester—then, as now, under the guidance of *farmer Lincoln*—an appellation associated with my early recollections, under whose magic influence, hills and meadows have grown to be a city; and a little one has become a great people. Although I may mistake in my recollections of the time—I am not mistaken in my recollections of the fine specimens of stock I then witnessed—from the farm, I think, of Mr. Williams, of Northboro'—traces of which stock are here exhibited to-day—and more or less of which, I doubt not, are to be found in every town of the county, if not of the State. I remember then to have queried in my own mind, of what use can such overgrown animals be, except as objects of fancy. Is it not much better to take those of medium size, which can be made practically useful? But sir, the Exhibition in your pens to-day goes far to show, that my notions were not entirely well matured. Perhaps the suggestion of my venerable friend with me, had some influence in moulding my opinions, and awakening, I will not say a prejudice, but I must say an unfavorable impression, of these imported breeds of animals. But sir, I must admit, that from some cause or other, I know not what, these imported breeds (always excepting *milk cows*) have a majesty of appearance, that far exceeds all others; whether it is in the original stamina of the breed or whatever the cause may be, there is—and there is no getting away from it. The *farmers* to whom I have alluded, are particularly entitled to the credit of preserving them for our instruction. I speak now, sir, of the majesty of the appearance of this stock, which in a Cattle Show is no small consideration. I am well aware, that the real merits of these animals are to be tested by a stricter analysis; which alone is to be found in the stalls of the practical farmer. Go among those who live by farming, and who so calculate to live, and you will there find the true tests of their merits. If you find these animals have commended themselves to their approbation, and that they continue to rear them, and to prefer them, then you may be quite certain they are to be preferred. There is among our practical farmers, a certain discriminating instinct of good sense, that seldom fails to designate what is to them most beneficial;—and although they may not at all times be able to give a reason for the faith that is in them—still by their works shall ye know them—and by their works shall they be commended to approbation. This is one, among many topics, worthy of the attention of those who are looking upon our Cattle Shows, to ascertain the benefits, if any, that accrue therefrom.

It is not sufficient, that *here* and *there* may be found an enterprising individual, who keeps a few of these cattle, for the purpose of exhibiting their comparative superiority;—but how is it with the farmers generally; do they prefer this class of animals? and if they do not, why is it that they do not? I cannot answer for Worcester, because I do not know how is the fact: this is something about which I wish to be informed; but I can answer for Essex, and am constrained to say, that notwithstanding many efforts have been made to spread this stock among our farmers, still very

little progress has been made, in doing so. This brings to mind, what has been done, and is now doing, by the Parent Society, always foremost in doing good. By them we were kindly favored, two years since, with an animal of the Ayshire blood, which was kept at considerable expense, but which failed to commend himself to the favor of the farmers of the county, although stationed in Andover, Danvers and Newbury, three of the best farming towns of the county. Reports of like character, I have heard from several other counties; whether true or not, I cannot say.

Another topic of great interest to farmers, about which there is much yet to be learned, is the best manner of *plowing land*—whether it shall be done *deep or shallow*, and whether it shall be done with one pair of cattle or more. Here in Worcester, I perceive, the present year, and by the accounts that have been published for several years past, of your *plowing matches*, but *one pair* of cattle is permitted to operate in the work. The inference is, that in the opinion of the farmers of Worcester, this is the best way of doing this kind of work.—But is this so? Do the farmers of the county, generally break up their land in this manner? And is there power enough in one pair of cattle to plow day after day, as deep as a good farmer will wish his land to be plowed? A word to the wise is sufficient.

THE SWALLOWS.

From an observation extending through many years, and from the statements of a gentleman who had observed them through a long life, we have no doubt that the common barn swallow, the *Hirundo Americana* of Wilson, leaves Massachusetts and New Hampshire usually on the 27th day of July of each year. We have observed occasional deviations, but in such cases have noticed prospects of a storm, or the prevalence of a strong, south wind. The second broods and those of weak wing seldom start with the first large migration. They wait and practise their evolutions in the air, but improve the earliest moment to leave.

NUTTALL strangely states that the swallows “retire from Massachusetts about the 18th of September.” Now we will venture to say that there is not a swallow to be found in the State at that time, unless it be one of a very late brood, or unable to leave in consequence of sickness or some injury which it has received. He also states that they are seen here about the last of March or first of April. On the contrary, they do not appear here until the last of April or the first of May, and often extending into the middle of the latter month.

Other causes entirely unknown to us undoubtedly operate, not only to detain, but to cause them sometimes to return after they have thus once departed. An English writer states that he “has observed that when a large number of swallows have congregated in the neighborhood of Liverpool, they have suddenly disappeared, but upon a strong gale of wind arising, they have as suddenly re-as-

sembled till the gale was over.” This was the case the present season, as will be seen.

The white-bellied swallow, *hirundo virides*, comes first in spring and retires the latest in the autumn. The climate of England is much milder than ours, and the barn swallows do not appear there until the 13th of April.

Since the 22d of July the swallows have been gathering in large numbers, and for an hour or two before sunset each evening assembling on the roofs of the barns, settling occasionally upon the tops of the corn, then mounting into the air with cheerful twitterings, and preparing with unwonted zeal for their departure from the fields and gardens they have made so pleasant. On the evening of the 27th, their numbers had astonishingly increased, and they were in a state of the utmost activity, swarming upon the roof of a barn, then covering the top of a large apple tree, and wheeling in clouds from that height to the cornfield and lighting upon the spindles of the corn.

After performing many evolutions, and having a vast deal of talk and “conferring and expatiating their state affairs,” they gradually settled away in detached portions for the night, but where we could not ascertain, and remained

—“till morn,
Waked by the circling hours, with rosy hand
Unbarred the gates of light.”

Early on the morning of the 28th, the barns, the corn leaves, tree tops and reeds by the river side gave up their living hosts.

“As bees
In spring-time, when the sun with Taurus rides,
Pour forth their populous youth about the hive
In clusters;
so thick the airy crowd
Swarmed and were straitened; till the signal given.”

Then, at a quarter before six, they headed south, and on rapid wing were soon lost to the sight. In the course of the morning a few stragglers were seen, who congregated on their favorite spots, and by sunset some fifty to a hundred were collected.

On the morning of the 29th, however, one or two things must have happened;—that those leaving on the morning of the 28th returned, or that new accessions were made to the few left behind during the night; for larger numbers than ever were now present, and the excitement, conferences, and departure and return of delegations had increased. This lively interchange of views and preparation was kept up for a short time, the numbers apparently increasing until about six o'clock, on the morning of the 29th, when they departed for the south, leaving only a few behind.

Mr. WHITE, in his delightful History of Selborne, seems to have entertained the idea through life, that the swallow does not migrate, but remains in its northern haunts in a state of torpidity. But he failed to produce a tenth part of the evidence to support his theory that may be adduced against

it. From England, they undoubtedly pass across the channel, over France and Spain, and across the Mediterranean into Africa; while our swallows probably pass the winter not farther north than New Orleans, and perhaps much lower down. It has always appeared singular to us that they should leave while there seemed to be an abundance of their favorite food. But "the strong propensity of migratory birds to leave and return at the appointed season, plainly demonstrates that this unwavering principle within them is an instinct given by a beneficent Creator at the very time best adapted for their flight, and which is apparently irresistible." The barn swallow and the bob-o-link congregate and make preparation for their departure, as do the ducks and geese. We have noticed this in some of the other swallows, but not in the blue birds and larks. The male bob-o-link changes his plumage, putting on the russet dress of the female, and assuming her note; but at what time they leave we do not know.

This whole matter of the birds is exceedingly interesting; and we believe it is as profitable to the farmer to know more of their habits as it is to the astronomer to know the courses of the stars, or the times of the rising and setting of the planets. The pecuniary effect is something—the moral still more. We make no apology, therefore, for stepping aside for a moment from the more common farm work of the season. Encouraged by the pleasing intelligence of the arrival of the "two-tailed bashaws" in the West, we shall confidently expect to hear something of our friends, the Swallows, in the South.

For the New England Farmer.

POTASH WATER FOR TREES.

BY M. M. COFFIN.

MESSENGERS. EDITORS:—To your inquiries in the *Farmers* of the 24th ult., I would reply as follows:—

1. *The age of the trees.*—The orchard consisted of seven rows of trees; four rows of them were budded six years, two rows five, and one row four years ago the present month—taken from the nursery and set as an orchard the spring following the first year's growth of the bud respectively.

2. *How cultivated.*—Have been manured from the barn-yard, and rather sparingly, say 15 loads per acre—spread on broad cast and plowed in, planted with corn and potatoes alternately, this year the latter; trees kept well pruned, done with a sharp knife and saw, never washed but once.

3. *Kind of soil.*—Of a deep clayey loam, a small portion of it is inclined to sand and the coarser gravel, owing to the surface being rather undulating and sloping centraward.

4. *Was there any perceptible injury previous, &c.*—None whatever. The trees were thrifty and healthy, all started in the spring, (except one that was winter killed and was not washed) and grew rapidly; some of them put forth a few blossoms and up to the time of washing them, a fairer prospect of realizing an immediate income from a small outlay is seldom found.

Since writing my former article to you, it was thought that the trees might be saved, by removing the soil, and grafting them as low as possible, as the bark looked green below the application; this was done, but to little or no purpose, the strike was too fatal. Notwithstanding there is one whole graft alive and a few suckers here and there trying to grow, Mr. B. intends forthwith to employ some patent stump-puller, and then set his orchard anew.

Another orchard in this town of some 30 trees, 8 or 10 years old, came near sharing the same fate of Mr. B.'s, and near the same time. These were washed with potash water alone, (pound to 2 1-2 gallons.) The trees, however, were not killed, but the general appearance of a few of them reminds me of the following incident. A certain "Old Bill," a laborer once in my father's employ, was accidentally run over by an ox-team, and while lying on the ground some one ran to his assistance and said, "Why, Bill, have you got killed?" "No," said he, "I ain't killed, but I'm most darndly wounded." This, stripped of its vulgarity, will apply to a few of the above trees.

The gentleman informs me, he is confident if the wash had been but a trifle stronger, he should have destroyed his orchard. We have all been surprised at the aforesaid results. Potash water has been used to some extent in this section for several years, and without any very perceptible injury. And now, Mr. Editor, as there are other washes more simple, cheaper and safer, we are determined to use them and let those use potash water that have an orchard to spare now and then.

But to my friend Wheeler, if he is still in doubt as to the facts of the case, we will endeavor to satisfy him if he will be at the expense of time and trouble "some sunny day," of reporting himself at the Hampton Falls Railroad Station.

I have delayed answering your request, expecting to note the time of the swallows' (a) departure, but as yet they are as plenty as at any previous part of the season. Yours, &c., M. M. C.

Hampton Falls, Aug. 10, 1852.

REMARKS.—Mr. COFFIN will accept thanks for his kind reply to our queries. In regard to this matter we have no prejudices to sustain and no one's practice or theory to demolish. When we say that the wash, as strong as it is frequently used, a pound to a gallon, is dangerous, we are sustained in the assertion by what we have seen ourselves, as well as by the statement of others.

(a.) Did Mr. Coffin observe whether his birds were the barn swallows, or the white-bellied swallow, which retires later? In our vicinity there are in the course of the season, the barn, white-belly, chimney, bank, and Labrador swallows. Near our dwelling, not a chimney swallow appeared until the barn swallows had left. The Labradors build a curious nest under the eaves of barns, with an entrance of only a small hole of between one and two inches in diameter. With the exception of a few stragglers, none of the barn swallows have been seen with us since the 29th of July.

METEOROLOGICAL TABLE, KEPT AT MANSFIELD, MASS., FOR JUNE, 1852.

Days of June.	OBSERVATIONS, &c.	Sunrise.	1 P. M.	9 P. M.	Force of Wind.	Direction of Wind.
1.	Fair.	44	72	64	Breezes.	N. W.
2.	Partly cloudy and partly fair.	53	82	63	Breezes.	S. W.
3.	Partly cloudy and partly fair. At 12 M., a slight shower, with little thunder. At 5½ P. M., a light shower.	56	83	67	Light airs.	S.
4.	Cloudy. From 12 M. to 1 P. M., very little rain.	53	57	53	Light airs.	N.
5.	A. M., clear. P. M., entirely clear.	44	63	44	Breezes.	N. E.
S. 6.	At sunrise a white frost seen in my door-yard, and in low ground and meadows.	31	70	56	Brisk gale.	S. W.
7.	Partly cloudy and partly fair.	54	75	58	Brisk gale.	S. W.
8.	Cloudy. Little rain during the day and night; fell 4 inch.	58	74	63	Light airs.	S.
9.	A. M., cloudy. P. M., fair.	66	78	57	Breezes.	S. W.
10.	Morn. clear. 11 A. M., clouds come over. 12 M. and after, clear—windy.	51	78	56	Brisk gale.	W.
11.	Fair. Early in evening, Aurora Borealis.	44	64	43	Breezes.	N. W.
12.	Fair—some cumuli.	41	71	52	Light airs.	N. W.
S. 13.	Fair.	42	81	56	Light airs.	N. W.
14.	Clear—warm.	45	88	63	Light airs.	S. W.
15.	Morn. clouds up, and at 9 A. M., a shower, enough to lay the dust, with little thunder and lightning.	60	88	74	Light airs.	Variable.
16.	Fair. Grass and other things suffer for want of rain. Thermom. at 2 P. M., 9°. Eve., lightning and thund. in South.	62	94	76	Light airs.	N.
17.	Fair. P. M., has the appearance of showers. At 5 P. M., a light sprinkle, and also at 9. At 7, wind shifts to N. E.	66	93	67	Light airs.	S.
18.	Morn. cloudy. P. M., fair. [Drought.]	64	88	62	Breezes.	N. W.
19.	Fair. Fair at sunset, but lightning in evening in the west, and latter part of night rainy.	58	83	63	Breezes.	N. W. & S.
S. 20.	Morn. cloudy. Day fine. At 4, fine shower.	61	83	63	Light airs.	Variable.
21.	Morn. foggy. Day fair.	58	83	62	Breezes.	Variable.
22.	Morn. cloudy. 10 o'clock fair till 4 P. M., then clouds up, and at 4½ begins to rain moderately. At 5, hard shower, and showery, with some thunder and lightning, till 8½ eve. Plowed ground pretty well wet.	63	80	63	Brisk gale.	S. W.
23.	Fair.	52	74	54	Brisk gale.	W.
24.	Fair. Good hay weather.	42	76	58	Breezes.	S.
25.	Morn. clear; then clouds up like the fall of the year, and cool.	54	61	54	Brisk gale.	N. W.
26.	Fair.	50	75	52	Brisk gale.	W.
S. 27.	Fair.	47	84	63	Breezes.	S. W.
28.	Fair.	58	87	63	Light airs.	W.
29.	Fair. A. M., a full, bright circle round the sun.	50	86	64	Breezes.	S.
30.	Fair, till 20 minutes to 4 P. M., then light showers.	56	83	63	Breezes.	S. W.

For the New England Farmer.

OBSERVATIONS ON THE WEATHER.

MR. EDITOR:—The above table is taken from my Meteorological Diary for the month of June, 1852, kept in Mansfield, Mass., and upon which I make the following remarks.

This month has been remarkably dry, and vegetation has suffered some; English hay is cut short one-quarter of a crop from last year. There was a frost on the morning of the 6th, which cut down the corn, &c., in a few localities, cut off the crop of swamp whortleberries in this vicinity, and I suspect injured cranberry vines, &c. There was but one day that the quicksilver in Fahrenheit's thermometer rose above 90°. In 1851, there was but one day when it rose above 90°, viz., the 30th, when it stood at 1 P. M. at 94°, the same as this year on the 16th.

It is not every year that the heat is as great as 90° on any day in June. In looking over the account which I have kept since 1836—sixteen years—I find the following:

In June, 1836, the thermometer on the 17th indicated 91° at 1 P. M.

In June, 1837, the highest was 86°, on the 1st, 21 and 30th.

In June, 1838, the 10th, at 1 P. M., was 90°; 11th, 93°.

In June, 1839, the highest was the 27th, 86°.

In June, 1840, the highest was the 29th, 89°.

In June, 1841, two days over 90°, viz.: on the 8th, 91°, and the 30th, 93°.

In June, 1842, the highest 81°, on the 26th and 30th.

In June, 1843, two days, 22d and 24th, at 90°.

In June, 1844, the highest was the 25th, 89°.

In June, 1845, two days, viz.: 9th, 99°, and 24th, 90°.

In June, 1846, the highest was 88°, the 19th.

In June, 1847, three days, viz.: the 25th, 92°; the 27th, 90°, and the 28th, 94°.

In June, 1848, two days, viz.: the 16th, 93°, and the 17th, 96°.

In June, 1849, five days in succession, viz.: the 20th, 93°; 21st, 96°; 22d, 94°; 23d, 92°; 24th, 91°.

In June, 1850, two days, viz.: the 19th, 90°; the 20th, 94°.

In June, 1851, one day, viz.: the 30th, 94°.

In June, 1852, two days, viz.: the 16th, 94°; the 17th, 93°.

Thus for sixteen years last past, but twenty-two days of June when the thermometer was above 90°, and six years during the time when it did not rise so high as 90°.

In 1836, but two days in July as high as 90°.

In 1837, no day as high as 90°. In 1838, four days in July and one in August as high as 90°.

In 1839, two days in July and two in August. In 1840, four days in succession in July and two in August. In 1841, one day in July and two in August. In 1842, no day in the season. In 1843, two days in July. In 1844, no day in the season.

In 1845, six days in July; one day, the 14th, as high as 96°. In 1846, four days in July; two days as high as 96°, viz., the 10th and 11th; five days

in August, and three days in September, viz., the 6th, 7th and 8th. In 1847, ten days in July and one day in August. In 1848, one day in July, the 21st, and three days in August. In 1849, seven days in July the thermometer stood over 90°; one day, the 12th, at 96°, and the 13th at 97°. In 1850, two days in July and one in August. In 1851, one day in July, (the 17th, at 91°.) This year (1852) already five days in July.

The thermometer that I use was made by John Pool, of the adjoining town of Easton, whose thermometers are noted for their accuracy. It is placed at the north side of the house, and shade trees keep off the reflection of the sun. In mornings and at night, out here in the country, it generally runs *lower*, than it does in the city.

Yours, &c., ISAAC STEARNS.

Mansfield, July 26, 1852.

For the New England Farmer.

THE SANDWICH ISLANDS.

Makawao, Maui, Sandwich Islands,
March 25, 1852.

EDITORS N. E. FARMER, BOSTON, MASS.:

GENTLEMEN:—Mr. William A. McLane, a neighbor and friend of mine, requested Sherman Peck, Esq., of Pittsfield, Mass., who had once lived at the islands, and who re-visited us in the autumn of 1850, to procure and send him, on his return to the United States, a good Agricultural newspaper. In compliance with this request, Mr. Peck sent him the *New England Farmer*. Mr. McLane thought much of the paper, and had he been spared, would doubtless have continued to take it. On his death-bed, he told me to take the paper the remainder of the year, as Mr. Peck paid in advance, and the postage also. Having looked over all the numbers of the *Farmer*, and feeling, as I do, that such a sheet would be useful among us on Maui, I wrote to Mr. Peck to have it continued. But as he is in California, I write to say, if Mr. Peck has not made arrangements with you on my behalf, please send to my son, J. Porter Green, Makawao, Maui, Sandwich Islands, by mail, *via* California, as it now comes. Ere I close I will tell you to whom to send your bill for payment.

But I may not send you blank paper at a time like this, when "many are running to and fro," and thus increasing knowledge. I think you will like to hear occasionally from us at the Sandwich Islands, especially on the subject of Hawaiian Agriculture. I will, therefore, fill a couple of sheets for you at once, and, if spared, I will communicate from time to time, as I may have anything worth your hearing.

Allow me to begin by saying that among the miscellaneous items in your paper of December 13th, 1851, you have the following:—"It is stated that a gold mine has been discovered at the Sandwich Islands." Yes, gentlemen, before your paper arrived, I had myself heard it so stated. Haleakala, the mountain directly above me at this place, the highest land on the island, is the spot where it has pleased some lover of the marvelous to locate this mine. At any rate, some one, about a year ago, wishing to "make the natives stare," to create an excitement, hinted to the people of Wailuku, a village some fifteen miles distant from us, and about thirty from the mountain, that gold might be found there. This was enough to excite

the curiosity of some of the loungers there, and they set off to examine the summit of Haleakala, and secure, if anything of the kind could be found, the precious metal. A few weeks since, I stood on the top of the said mountain, but I saw neither gold nor any signs of digging for gold. You would not expect to hear of gold could you now stand on one of the mountains of Hawaii, and see, as you might do, this very day, a volcanic crater on a neighboring mountain, throwing torrents of burning lava 500 feet into the air, and descending in torrents, forming a river which destroys, in its course toward the sea, everything in its way. Let me tell you what the Hawaiian Islands are made of; 2d, what they are producing; and 3d, what they may be made to produce by the blessing of God on honest, industrious and persevering labor.

1. Of what the islands are made. Rev. Sheldon Dibble, in his history of the Sandwich Islands, in speaking of their origin, says it is "matter of conjecture." Some think that where the islands are now, was once nothing but the rolling ocean—that the whole group, with their iron-bound coasts and snow-crested mountains, were thrown up from the depths below, by volcanic agency. The islands are merely masses of lava. Even the soil is decomposed lava. Craters of extinct volcanoes are everywhere to be seen on the islands. Some are partially extinct, continuing to emit smoke; and one presents a lake of raging fire, with occasional eruptions of awful grandeur. Such is the character, not only of the Hawaiian Islands, but of many groups of islands in the Pacific Ocean. From these appearances the opinion is formed that the islands are of volcanic origin. This opinion, however, is necessarily mere conjecture, and is, of course, of very little weight. I by no means agree with Mr. Dibble in this matter. If any portion of the globe we inhabit may be said to be of volcanic formation, I am sure these islands is that portion, or one of such portions. Mr. Jarves remarks, in his history of the islands, "The minerals are few and simple, consisting of the usual varieties of the lavas, from the most solid and granular, to the light pumice stone. No metals have been discovered. The soil of the islands is formed of decomposed volcanic rocks, sand, mud and ashes. To be made fertile, it requires constant irrigation. Valleys which receive the debris and rains of the mountains, and for ages have been accumulating deposits of vegetable mould, are exceedingly rich and productive; but they are of limited extent." There can be little doubt, if any, that all the soil of the Hawaiian Islands is decomposed lava. This is in different stages of decomposition, scarcely any soil being found in many places, while in others it is considerably rich and strong.

2. What the islands produce at the present time. The principal article of food is the *kalo-arum esculentum*, used in great quantities by the natives of the islands. This requires a good soil, and does in fact occupy the richest valleys of the country, and quickly exhausts the soil. The sweet potato seems to be indigenous, and is easily raised. The Irish potato was introduced into the country about 20 years since, and has become very plenty. We greatly need, however, a change of seed, not only of this, but of all vegetables and grains. Wheat also does well in some sections of the islands, and I see not why a home supply could not be raised. Indian corn, beans, onions,

squashes, cabbage, melons, cucumbers and tomatoes flourish. So we might raise most garden vegetables had we the seed, and did we know exactly when to plant it. Of fruits there are the *Ohia*, or Hawaiian apple, a rather insipid, but juicy and cooling fruit; the fig, grape, guava; the pine apple, orange, citron and lemon; the coconut, banana, and bread fruit, though the latter has more of the vegetable than of the fruit. These are the principal productions, which do so well that there is no more risk in depending upon them, under God, than there is in depending upon corn, beans and potatoes, in New England. Of the sugar cane I have not spoken, it being well known, I suppose, that this is a sugar-manufacturing country. The coffee I should have added to the list of productions. It does well, and is of an excellent quality. A Mr. C. Titcomb, an American gentleman at Kauai, it is said has raised 80,000 pounds the past year. The peach has been introduced and does well. I think the apple, quince, currant, pear, and other fruits of the temperate zone, might be cultivated in some of our mountain districts, to high advantage. The greatest, and indeed almost the only draw back to the successful prosecution of agricultural pursuits at the islands, is found in what foreigners call the "cut worm;" the natives call it the "*pelua*." At seasons it is very destructive, and no one has as yet succeeded in destroying it. I hope we may find some means of ridding the country of this enemy of all vegetation. We have a standing committee on the "means of destroying the worm."

3. I come now to speak of what, by the blessing of God on industrious and persevering labor, the islands may be made to produce. (a.!) I hardly need to say in addition to what I have remarked above, that they may be made to produce everything necessary to the physical comfort of a multitude of people. Favored with a delightful climate, and, on the whole, fruitful soil; having excellent, and in many places abundance of water; pasturage for cattle, horses and sheep; sheep, goats, swine and fowls being easily raised; no hay nor fodder of any kind being required for winter; no wood being needed for warming the houses of the people, and woolen clothes, shoes, &c., are seldom worn, you can see at a glance that multitudes of people might here find a comfortable subsistence.

(e.!) Again, the islands might be made the abode of an intelligent and happy community. To convince you of this, I need not spend many words. Two or three facts will suffice. One is the attachment easily acquired for these islands. So delightful is the climate, so mild and healthy, removed on the one hand, from the frosts and chilly winds of your northern clime; and on the other, from the sultry, withering blasts of Africa and the East Indies, the scorching sun of Borneo and Sumatra, also the tornadoes of the West Indies; that few or none who reside here for a few years, and then return to the lands of their childhood, are contented to remain at home. They sigh for their island home. I could name quite a number who pant to come back—who would give almost anything in their power, could they be among us once more. Another fact is the facility with which men can obtain a comfortable living. The mildness of climate is such that no industrious man need suffer—more than this, no industrious man

can fail to gain property. The climate too is admirable. Little do we need a physician with the blessing of God on temperate living, and economy. No better place than the islands do I know for study, so that a man may divide his time between labor and study, and with a good neighborhood of congenial spirits, I see not why any man would not find the islands an abode of contentment and happiness.

(i.!) I might add that the islands might be made to produce wealth. This I shall merely state, and you can draw such a conclusion from what I have already said. We bless God that gold is found here *only* by cultivating the soil. There is no "royal road to wealth" among us. Still there will, unquestionably, be much wealth procured here, and being procured by the sweat of the brow, I cannot but hope that it will spend well, and that we may be blessed with an intelligent, industrious, happy community.

Yours, with high respect, J. S. GREEN.
P. S. My revered friend, William Jackson, of Newton, will hand you this, I trust.

DEATH OF A. J. DOWNING.

With feelings of the deepest sadness it becomes our painful duty to announce the lamented and untimely death of Mr. DOWNING, by the burning of the steamer Henry Clay on the Hudson River. Untimely, because we believe it was occasioned by gross ignorance and carelessness. Such a catastrophe demands the most searching investigation into its cause, and that the severest punishment be inflicted upon those who are culpable, if there is any power left on earth that can reach them.

Mr. DOWNING's death is a public calamity. We believe the death of no man in the union would be a greater loss. He was the distinguished author of the popular works on Architecture, Landscape Gardening, &c., and at the time of his death Editor of *THE HORTICULTURIST*, published at Albany. He has done more to infuse a correct taste into our people on these subjects, and on gardening and farming generally, than any other man now living in our country. He was also engaged by the government in laying out and planting the Public Grounds, at Washington, and they had already assumed an appearance to satisfy the casual observer that a master mind was bringing them into order and beauty. While we endeavor to practice his teachings and imitate his virtues, his memory shall ever be fresh in our hearts.

THE GRANITE FARMER, published at Manchester, N. H., is like good wine, grows better and better as it grows older. It takes hold of the vast work to be performed with earnestness; notes the current events, has able correspondents, and is worthy of a generous support.

One of Hussey's Reaping Machines, and one of Ketchum's Mowing Machines, may be seen at the warehouse of Messrs. Ruggles, Nourse, Masco & Co., at Quincy Hall.

For the New England Farmer.

TALL RYE.

MR. EDITOR:—While, from all parts of the country, so many are complaining of the excessively hot weather, and of the effects of the drought, would it not be well, by way of offset and to divert public attention a little from present causes of complaint, to give a specimen of *tall rye*. This is not done merely, as a mother does to her crying child, give it a sugar plum in order to make it forget its troubles, but to induce your readers, who are among the most intelligent part of the community, to look a little on the opposite side of the picture.

The whole piece of land, on which the rye grew, contains two acres and a third. It is new land, having never been previously burned over. On the whole piece the rye was very stout and tall, and stood up very straight, with the exception of the lopping heads. On one half of the piece, the specimen straws measured seven feet two inches and a half, cut above the ground. The heads are five inches long, very well filled, and very heavy.—Each head contains eighty kernels of wheat. And the straw is as bright as California gold.

MOUNT GRACE.

Warwick, July 26, 1852.

REMARKS.—Such are the seeds to be preserved in order to improve future crops.

TO HAVE A GOOD HORSE.

It is not sufficient to have a good colt, the product of a superior mare with a stallion of good blood and established reputation. This is necessary, but it is not all that is necessary. A most promising colt that attracts universal admiration while it follows the mare, may be grown into an almost worthless horse. How then, having a good beginning shall we grow a good horse, for good horses alone are profitable to raise? By exercising the greatest care in their management until they have ceased to be colts. Many ruin, almost, a colt the first winter by starvation, by turning it into the yard to run with the young cattle, to pick up a scanty nourishment and that of the cheapest and coarsest food. There is on the other hand no one season of its life when care, and good and full feeding of appropriate food will tell so much for good as this same first winter. A friend, who, for now many years has annually sold two or three young horses at the highest market prices, has often assured us that at no time in the life of his colts did he take so good care of them and feed them better than during their first winter; and that by the effect produced upon them the first year he could tell what kind of horses they would become. There is something so absurd in scanting the supply of nourishment to a young growing animal! Some fancy that such a course will render the animal hardy. The only effect produced upon the growing animal by an insufficient nutrition, is to hinder his best development. Wait until he has attained his growth, and then stint him if you choose. It can be done then with less injury.

Colts are often put to hard work at too young an age. It not unfrequently happens that you will see a horse of five with all the wear and tear of ten in his appearance. This should never be.

The exercise of the same judgment in the management of colts most use towards children would prevent this.

Colts should be put to exercise and training at an early age, and may do light labor to advantage, but to put upon four years the labor proper only for six or seven years, has been the ruin of many a promising animal. There are other suggestions that occur properly in this connection, but we will omit them, considering the two mentioned above as the most important.—*Granite Farmer*.

For the New England Farmer.

ALDERNEY OR JERSEY CATTLE.

MR. EDITOR:—Sometime in 1850 or '51, the Massachusetts Society for the promotion of Agriculture imported about a dozen of these animals, selected by Mr. T. MOTLEY, Jr., of West Roxbury, with much care. Several of them have been taken by individuals, the remainder are now under the care of Mr. Motley. I had the privilege of seeing them this morning, and learning their characteristics from the person who has the direct care of them. In many respects, they are superior to any animals I have ever seen.

First, The quality of their milk. Positive assurance was given, that *seven quarts* of their milk would usually yield a pound of butter. This would render its quality, for this use, *fifty per cent.* better than most other cows' milk. For all other uses it was said to be proportionately good. Judging from the specimens we have seen, we should think this estimate worthy of credit.

Second, Their docility and ease of management. This is remarkably true of the cows and heifers. They appear as gentle and docile as kittens. No bad traits of character are discoverable in looks or actions.

Third, Their sleek, short hair, and general neatness of appearance. This is true from the smallest to the largest; there are half a dozen calves, from one to four months old, all bearing the distinct marks of the race—having the same brilliant eye, and deer-like aspect.

There were two bulls of this class, two years old last spring. These were fastened in the barn.—One of them is a handsome, kind animal; the other looked as ferocious as a tiger. We learned that it was but a few months since, this animal tossed his owner several feet in the air, to his great personal hazard. This, and the exhibition by Mr. Webster's German bull, at Franklin, should teach us to beware of these foreign breeds, when their character is not fully tested.

Mr. Motley has also an Ayrshire bull, four years old, as handsome and complete an animal as I have ever seen. Those wishing to raise calves, have as fine an opportunity to command blood of first quality, by calling on Mr. Motley, as can be desired. We have occasion to know that the cow furnished by Mr. Motley to Mr. Loring, of Beverly, is second to none within our knowledge. We are perfectly assured that two pounds of butter, a day, is made from her milk; and that the cream, before it is churned, is so adhesive, that it cannot be turned from a pitcher. Without doubt Mr. L. keeps this animal in the best manner; such products will justify such keeping.

If, Mr. Editor, you have never seen these animals, I should like to know how your views cor-

respond with mine. I have spoken plainly, endeavoring to avoid all extravagance of expression. But if it be true, that the same feed, when used by a good animal, will produce products worth twice as much as when used by a poor one, then how important is it to endeavor to obtain the good ones. Entertaining these views, Messrs. Gray, Everett and Winthrop, and others associated with them, have spared no pains or money, to teach the farmers of the Commonwealth this lesson.—In behalf of the farmers, I desire to acknowledge the favor.

F.

July 24, 1852.

REMARKS.—We thank our intelligent and constant friend for these brief impressions of his visit at Mr. MOTLEY'S, and for his opinions of the foreign stock. We have examined the stock of which he speaks, and embrace this opportunity to do what we intended to do at once, express our obligations to Mr. MOTLEY for the kind attentions which we received while examining the stock and walking over his beautiful estate. Those who have not seen fair specimens of these animals, will be quite likely to consider almost any description of them as overwrought; but to those who have examined and tested them, most of the descriptions given will not appear extravagant. The verbal statements made to us by a gentleman who has imported some of the Jersey cows, fed and milked them, and made the butter from their cream himself, fully corroborate all that our correspondent states. Persons engaged in dairy business will do well to give their attention to this stock of cattle. If their milking qualities are as favorable as their form and color are beautiful, they must be pre-eminently good.

TREE STRUCK BY LIGHTNING.

REMARKABLE OCCURRENCE.

A large white ash tree, in Lincoln, on the road side in front of the house of Mr. Macintosh, was struck by lightning, during the storm on Tuesday afternoon, 22d June, and shattered in a most remarkable manner. The tree was about 90 feet in height, 11-12 feet in diameter, of fine vigorous growth and one of the most magnificent forest trees in the town. The trunk rose nearly thirty feet from the ground without a limb. The bolt struck the tree on its highest branch, and in its progress downward severed all the great limbs above the trunk from each other, and they fell on the ground over which they grew and had so long shaded. One of the great limbs fell between the trunk of the tree and the house, which was only about 30 feet distant, and did no other damage than the breaking of a few panes of glass in the windows. The trunk of the tree was quite equally divided, for twenty feet or more, into six sections, as smoothly as though they had been cut with a saw, and were left fixed to the roots, spreading outwardly. The bark on some of these sections was entirely stripped off, and the surface of the wood, so suddenly exposed, was completely covered with dust, thrown up by the falling limbs and adhering to the sap. The body of the tree, therefore, must have been completely denuded of

its bark, before the branches reached the ground. As the sections of the tree were inclined outwardly, the heart of it, clinging by large slivers to one of the great limbs, was drawn out of the tree and thrown up into the air, when the limb fell over by the weight of its towering top. It was left standing like a great pair of shears, wrenched by the tremendous force of the bolt from the very centre of the tree, which was nearly three feet in diameter. Large slivers from the inner wood of the trunk and pieces of the bark were thrown several rods distance into an orchard, which was strewn with the fragments. One of the men who saw the top part of the tree when it was struck, said the tree seemed to sink down as if into the earth, and represents the crash of the thunder and the falling of the tree as perfectly tremendous. A portion of the lightning followed the roots of the tree towards the cellar wall of the house, where some slight damage was done. There were only two females in the house at the time, (about 1-4 past 4 o'clock,) the men being at work in the field and the children at school. One of the women was stunned but soon recovered and received no injury. The scene of this remarkable occurrence, which illustrates so clearly the immense power of the lightning and the instantaneousness with which it executes its work, has been visited by many hundreds of people from Lincoln, Concord and the adjoining towns. The location of the tree is on the low ground of the town, a few rods south west of Flint's Pond, at the base of the highest hill in the vicinity.—*Bunker Hill Aurora*.

BIRDS—A CARELESS OBSERVER.

J. C. H., of Syracuse, says, in a communication to Mr. Downing, on "birds, insects and other matters,"—"and now one word as to the utility of birds. It is a common belief that they are great benefactors of man in the destruction of pestiferous insects. To this belief I am an inexorable infidel. Who ever saw one of the whole race touch a caterpillar, which, at this season, infests our orchards,—or other kindred nuisances, which, late in the season, appear on all trees, indiscriminately?"

Now, we would ask, where has J. C. H. been, all his days! Has he ever watched the operations of birds? Has he ever killed and opened any of them, and examined the contents of their crops and gizzards? If he had, he would never be caught asking such questions as he has, nor would he ever intimate that birds do not destroy caterpillars and such like nuisances. We have seen the Baltimore Oriole, or English Robin, often seize upon the common tent caterpillar, as they are called, which infest our orchards, and tearing them open feast upon their entrails. We have repeatedly seen the common robin in gardens, ferret out the cut worm and swallow him. The swallows, at sunset, scale along the surface of the ground, and snatch in their rapid flight thousands of insects on the wing. Other birds devour other insects, and if he is faithless, or has never seen the birds catch them, let him just catch the birds, and cut them open, and he will often find the insects themselves safely stowed away in their gizzards, or other parts of their digestive organs. We advise him to study ornithology a little, in a practical way, and mend his wisdom in this particular.—*Maine Farmer*.

THE MICROSCOPE.

No very earnest interest can be taken in a subject unless we know something of it. A person who has little taste for mechanical matters, who never examines machinery or reads upon the subject, looks upon the precise and beautiful action of the locomotive as it passes him, with about the same interest that most of us would upon a rusty page of Arabic or Low Dutch. So it is with the Farmer. When the weevil destroys his wheat, the grub his corn, the fly his turnips and potatoes, the caterpillar his trees and the curculio his fruit, in his vexation of spirit, and the utter want of knowledge of the purposes of the Great Architect in sending these destroyers, he is apt to look upon them as *an unqualified evil*. In heaviness of heart he is led to inquire,—why is it necessary that an interminable warfare must be waged against countless numbers of ever-changing, destructive insects, before we can reap in the crops, the fruits of our wearisome toils! We seem to have learned that *weeds*, after all, are a blessing—and if with patient assiduity and trusting hope we pursue our investigations, we shall by-and-by become satisfied that the beautiful creatures which we now denounce as robbers, depredators and pests, were perhaps necessary to our own comfort and welfare!

Let us, then, use every means within our reach to ascertain what their office and destiny is, what part they act in the great field of operation which we occupy, and how far they may be permitted to share with us the fruits of our labors. To do this we must study their *persons* and habits patiently and carefully, learn when they come and go, where they inhabit, and what they are about while with us, and if they encroach too largely on the crops we are cultivating, this knowledge may aid us in averting their encroachments.

The use of the *microscope* will not only aid us in our researches, but will open a world never conceived of before by many, and afford the liveliest gratification to the inquirer. As we examine and study, the insect and vegetable world will rise, not only into importance, but into a magnificent creation, exciting in us the most profound admiration of the wisdom and skill of the Creator! In a creature so small as scarcely to be visible to the naked eye, we find a perfect organization and wonderful adaption of parts to its habits. We find a strength and agility infinitely surpassing that of any man or quadruped that has ever existed; and a perfectness of construction and brilliancy of coloring outstripping the most gorgeous plumage and dyes of any of the feathered race.

Apply anything to its wonderful power, the minutest piece of skin taken from the delicate finger that never toiled, and, lo! it has deep cells and high prominences, exhibiting a surface so uncouth as almost to shock the sensibilities of its late fair possessor! There are its deep recesses with

their corresponding ridges and shining, granulated appearance. You look into the mouth of a spider no larger than the head of a small pin, or see him close his beautiful eye. You “examine the edge of the sharpest razor and it will appear fully as broad as the back of a knife; rough, uneven and full of notches and furrows. An exceedingly small needle resembles an iron bar. But the sting of a bee seen through the same instrument exhibits everywhere the most beautiful polish without the least flaw, blemish or inequality, and ends in a point too fine to be discovered. The threads of a fine lawn are coarser than the yarn with which ropes are made for anchors. But a silk worm’s web appears perfectly smooth and shining, and everywhere equal. The smallest dot made with a pen appears irregular and uneven. But the little specks on the wings or bodies of insects are found to be the accurate circle.” How wonderful are these things to the mind that will reflect upon them!

But to what end shall all this labor be applied? will be the inquiry of the indifferent. Does he forget that the insect under the glass is the work of an Almighty Hand, lives, breathes, and enjoys, and makes a part of the wonderful creation about us! That it receives omnipotent care; comes forth and retires at its bidding; has its specific work assigned, perhaps to rear a mountain in the ocean, or undermine a city, or is, perhaps, too minute in its operations to arrest our observation, but still under the same fatherly care with ourselves! “In wisdom has he made them all. These all wait upon thee, that thou mayest give them their meat in due season. That thou givest them they gather; thou openest thine hand, they are filled with good. Thou hidest thy face, they are troubled: thou takest away their breath, they die, and return to the dust.”

“O Lord, how great are thy works! and thy thoughts are very deep.”

Remembering, then, that the tiniest of the insects which destroy our crops are the work of His “very deep thoughts”—that they all wait upon Him, that they may have their “*meat in due season*,” it becomes us to protect ourselves in all humility, in trusting hope, and all thankfulness of heart, for the abundance that is left.

BLACK RAIN.—On Friday morning, says the *Kilkenny Moderator* (Ireland,) between six and seven o’clock, a heavy shower, which lasted for upwards of twenty minutes, fell over the city and a considerable district adjoining. The rain proved upon examination to have been of almost an inky blackness, and had all the appearance of being impregnated with soot and charcoal. In the last year of the cholera we were visited by a similar shower, and in the popular superstitions the appearance of that dreadful disease was largely attributed to the circumstance.

NEEDHAM'S WHITE BLACKBERRY.

This engraving is a good illustration of a spur from a stem of the *White Blackberry* bush, handed us by Mr. J. S. NEEDHAM, of Danvers, in this State, the original cultivator, we believe, of the plant. It is a luxuriant grower, running up vigorously from six to ten feet. Buds are set on the stem less than two inches from each other, and each bud puts out two spurs, averaging about fifty berries, while the common blackberry has but one spur to a bud, and produces a much smaller number of berries.

The fruit is large, amber-colored and very sweet and rich. The plant is hardy, we understand, and easy of propagation. The demand for it, so far, has been considerably greater than the supply.

It is to be hoped that not only this fruit, but that the huckleberry and blackberry will be domesticated and improved in size and flavor by careful cultivation. The common high blackberry is already cultivated in our gardens to a considerable extent. The wild berries are now selling in Boston for from ten to eighteen cents a quart, and the demand hardly supplied even at these prices. Mr. Hoyer, in his Magazine, states that the liberal premiums offered for the common blackberry "by the Massachusetts Horticultural Society, have had the good effect of producing very general competition; and so superior have been some of the specimens—so much larger than when first exhibited, evidently showing what care and attention

will do for this as well as other fruits—that the society has deemed it advisable to offer a high prize for a seedling, with the hope of still further improvement: for, although what few attempts have been made in this way have not been attended with very favorable results, there is still reason to believe that it will yield to the ameliorating influences of cultivation, as well as the strawberry, the gooseberry, or the raspberry.”

For the New England Farmer.

DROUGHT—GRASS SEED.

FRIEND BROWN:—The last number of the *N. E. Farmer* for myself, and also that for the Friends School at this place, has not been received. Presuming it to have been a mistake, I thought I would inform thee, and ask thee to forward them.

We are now experiencing a most severe drought. Only one inch of rain fell here in last month, and up to this date we have had but one rainy day this month. The weather was very hot a considerable part of the time during the past month, and a strong, dry, westerly wind prevailed. Vegetation suffers extremely, especially garden vegetables. I think the potato crop must be light, for they have not been wet to the bottom of the hills since they came up. Some pieces of corn look well, but on sandy land it is drying. This is a good season to show the effect of manure. We have about two and a half acres of corn that was manured highly, and that has suffered very little, while another piece planted with less manure, is wilting and the lower leaves are dying. Pastures are destitute of feed, and corn-fodder is dying before it is half grown. Where the hay is taken off, fields present a dry, sunburnt surface, on which fire would run without any coaxing.

• Such is a correct, though brief sketch of the present aspect of things in this vicinity, and there is still but little prospect of rain. Grass seed sowed last spring almost entirely failed with us, and I wish to know if seed can yet be sown so as to secure a crop of grass next year.

Respectfully thy friend, LEVI VARNEY.
Providence, July 26th, 1852.

REMARKS.—Where grass seed was sown with oats or other grain last spring, we think you may sow again in August with good prospect of success, by spreading what fine compost manure you can spare. Sow your grass seed and harrow with a light harrow. If this is done just before or after a rain the seed will probably take well. If the ground was well manured in the spring the seed will be likely to start; but add the manure if not too inconvenient.

Although the drought of which you speak increases the price of farm products, that enhanced value does not meet his losses. Such droughts as have been experienced the last and present seasons are among the most discouraging features of the farmer's occupation. But the fertility and great extent of our country will be likely to prevent any pinching want. Some portions of this teeming territory will produce a surplus, and the great fa-

cilities of transportation will tend to equalize prices. In the mean time we must labor diligently in faith and hope, and all will be well.

THE BEST TIME FOR CUTTING TIMBER, &C.

Experience has proved that trees for timber, if cut at one season of the year, are far more durable than if cut at another. Various reasons have been suggested why this is so, and it is not yet perhaps fully determined; still as the time pointed as the best for durability is during the autumn, it is generally supposed that this property is modified by the amount of sap in the trunk, and the maturity of the wood itself. In the spring, or at any earlier period of it, the trunk of most trees is pressed with the ascending sap. The leaves as yet are still folded in the bud, and the surfaces for exhalation are only sufficient to carry off very slowly the watery part of the sap. Even after the leaves have expanded, or until mid-summer has arrived, the tree abounds in juices. When, however, the dry and sultry summer has arrived, and the new wood and buds have been matured and formed, the water part of the sap is mostly exhaled, and probably, too, the circulation is less active as the leaves become sere.

It is stated by Mr. Emerson, author of the valuable report on the trees and shrubs of Massachusetts, that the soft maple cut in September, is three times more lasting than ash or walnut cut in the winter; and from numerous inquiries which he has made in some quarters, and from information obtained from reliable sources, it seems he has established the fact that autumn is the time for cutting timber. When it is determined to cut timber, it is of considerable importance to strip off the bark in the spring that the body of the tree may dry during summer. When, however, it is an object to reproduce a forest from the remaining stumps, then winter, or the very first of spring, is much more favorable to the growth of sprouts.

¶ There are, then, two seasons for cutting wood; if it is expected to last, it must be cut the last of summer, or during the early part of autumn; if it is wished to clothe the surface with a new growth of trees, the cutting must be made late in winter.

It is, however, possible to modify these arrangements; if, for example, the wood is designed for timber, it is deprived of its bark in the spring, it may be allowed to stand and season till winter arrives, which is a period when farmers have less to do than in summer or autumn.

In seasoning, wood retains an amount of water which may be regarded as its constitutional supply. This constitutional water is very important; for upon its presence some of the most valuable properties of the wood depend. I refer to elasticity and strength. If wood, for example, is dried in a water bath at 212° till it comes to lose weight, its elasticity and strength is very much diminished. Hickory, when dried in this way, becomes as brittle as pine. In ordinary seasoning, or in steaming, I believe the strength of wood is not diminished. This observation may not be of much practical importance, as this last plan of seasoning is but rarely followed. The amount of water varies, as will be observed, in different species of trees, as well as in herbaceous plants.

In another point of view the amount of water is important to be known, for the difference between taking green and dry wood to market, as well as consuming, is very great; and so, also, as ample experience proves, there is a material difference in burning green or dry wood. The quantity of water varies from 20 to 50 per cent., and probably the average amount will not differ from 35 to 40 per cent. This water is not only of no use to the fire-wood, but it is prejudicial, as it must be dissipated by heat, in which act heat or caloric becomes latent or lost, especially if the wood is consumed upon a hearth or in a stove.

In addition to the effect of water diminishing the combustibility of wood, the alkalies have also considerable influence of this kind. Elm, which is a potash wood, burns with much less freedom than hickory, which contains much lime.

It is, however, possible that the size of the pores of wood may modify its combustibility. Black oak is a notable instance of a slow and drizzling combustion; the pores are large and numerous, from which the watery sap continually oozes.

In addition to the foregoing, we subjoin the following remarks from a letter written by Mr. Wm. Painter, of Concordville, Pa., to the Hon. Thomas Ewbank, of the patent office. We had intended the preparation of an article from our own experience and knowledge, in reference to the subject of timber cutting, but our design was superseded by a perusal of the foregoing, and the letter of Mr. Painter.

"During an experience of more than forty years as a plain, practical farmer, I have taken much interest in ascertaining the best season for felling timber, and I now state with confidence, that felling timber, such as all kinds of oak, chestnut, red hickory, and walnut, cut from the middle of July to the last of August, will last more than twice as long as when cut in winter, or common barking time in spring.

"For instance:—cut a sapling, say five or six inches in diameter, for a lever, in the month of August, and another of similar quality and size in winter or spring. I know, if the first is stripped of its bark (which at that time runs well,) it will raise a lever twice the weight that can be raised by the latter.

"Another great advantage to be derived from felling timber in the last running of the sap (the time above specified,) is, that it is neither subject to dry rot nor injury by worms; white oak, cut at this season, if kept off the ground, will season through two feet in diameter, and remain perfectly sound many years; whereas, if cut in winter or spring, it will be perfectly sap-rotten in less than two years.

"For ship building and other purposes, where great expense is incurred in construction, the immense advantage of preparing timber at the proper season must be evident to all.

"I have no doubt, a ship built of timber cut between the middle of July and the last of August, would last nearly twice as long as one built of timber cut at the usual time, and would bear infinitely more hard usage, as the timber seasons more perfectly, and is far harder.

"A few years since one of the large government ships, built in Philadelphia, of the very best materials, but several years in construction, when ordered to be finished and launched, was found upon

inspection to be entirely worthless in many of her timbers (though kept under cover) of dry-rot.

"In all my building for many years past, with large timbers of white and other oak, this has never occurred, nor are they subject to be worm-eaten.

"Even fire-wood cut at the proper season, is worth from 30 to 50 per cent. more than when cut in the spring or winter.

"If the above facts are considered of any value, please make use of them, and if those learned in such matters can assign any plausible reason for them, the theory may be of value to others as well thy friend."—*Union Artist*.

SPENT TAN.

A writer in the *Pennsylvania Farm Journal* states that he has been using spent tan bark in his garden with the best results. The soil on which it was tried, was a "stiff clay—altogether too stiff for successful gardening." The editor of the *Journal* sustains the opinion of his correspondent, in some experiments made in his own garden.

We have little faith in the use of spent tan bark as a manure, but a good deal in using it in compact soils, clay, and stiff loams. Chips from the bottom of the wood pile, saw-dust, or any coarse litter, would have much the same effect. The benefit arises mostly from making a heavy soil, light and porous—admitting air, warmth and light, and bringing its fertilizing powers into activity. Such heavy, inactive soils may be found upon most farms, where a judicious application of the tan bark and other coarse and cheap materials, would bring them into a productive state. But they need the same careful attention that the merchant bestows upon his affairs, in order to make any part fruitful of profit.

Let nothing, then, be lost—the washings by the roadside, the tan bark, chip manure, brakes, leaves and refuse meadow grass, will all have a fine influence upon the cold, compact soils.

BUTTER.—The editor of the *New York Farmer*, in a capital article upon the dairy, says that twenty years ago good managers were content with 100 to 125 pounds of butter, per cow, for the year. That the standard has been growing higher, until now, the dairyman who makes less than 150 lbs. is rather ashamed to name the quantity. In this age of improvement, he adds, that 150 lbs. should be the minimum, even of poor dairies, while no good dairyman should be satisfied with less than 175 to 200 pounds. That is a pretty high standard; but he mentions instances among his neighbors that came nearly up to it. One, a dairy of 20 cows, where the average was 170 lbs. to a cow, another 180 lbs., and another 197 lbs.

☞ We have received samples of the white blueberry from Mr. J. S. NEEDHAM, of Danvers. They are very sweet and delicious. Were they cultivated?

For the New England Farmer.

GLANCES AT NEW HAMPSHIRE.

BY H. F. FRENCH.

MY DEAR BROWN:—In common with "the rest of mankind" who are not under bonds to remain at home, I have, during the hot days of July, made sundry little excursions of mingled business and pleasure, in this Switzerland of America,—a State in which, whatever may be said of our other products, we have no difficulty in finding most acceptable candidates for the Presidency, whichever of the three parties may be in search of one. And by the way, the fact, that men of energy, of clear heads and noble hearts—of *persistence*—the quality which, of all others, best ensures success in all pursuits, and in all times and places, the fact that such men have oftentimes their origin among the rugged hills and the driving snows of the North, is worthy of consideration by northern men and especially by northern farmers. It is an agricultural *fact*, for like the crops themselves, it grows out of the soil!

He whose recreation it has been in boyhood, whose discipline it has been in youth, and whose business in manhood, to breast the snow drifts in winter, breaking wild steers and colts, or working in a logging swamp with the thermometer at zero, and again in summer, to mow the swath with the rest of the boys, under a July sun that would make the wool of a southern negro smoke—has some idea of the vicissitudes of life, and is not likely to be turned from his path by fear of hard work.

Last summer, in July, just before the wheat harvest, I passed twice through the whole length of the State of New York, and, amid those fields of waving grain stretching away in almost unbroken masses, for miles, it seemed as if the granite hills of New Hampshire were scarcely worth the toil of cultivation; but I looked in vain, among the fertile valleys, for New England thrift and New England homes, and the fact shown by the census tables that the crop of wheat throughout that great State, has been by a false system of husbandry reduced from an average of about thirty to less than fifteen bushels to the acre, in a single generation, brought up the reflection that they had not even kept faithfully the ten talents committed to them, and that the blessing upon those who had "been faithful over a few things," belongs rather to the true hearts which have, by severe toil, wrested from the unwilling hills of New England a competent support and happy homes.

Between Exeter and Concord, as indeed everywhere else in the State, indications were observed, early in July, of a severe drought. The hay crop will not, it is thought, exceed two-thirds of the amount of last year's product, and this fact, with another, which I think may be relied upon—that very little old hay remains on hand—furnishes matter for serious reflection among those of us whose farms are fully stocked with cattle.

The price of all hay-eating animals has been high, for the past two years, and an unusually large number of them, in consequence, have been raised. The failure of one-third the usual amount of fodder, must compel many to sell, while the demand is in no wise increased. A very little reflection, will enable the readers of the *Farmer* so to arrange their affairs, as not to be compelled to

buy hay next spring at twenty dollars a ton, to keep out a stock of cattle, whose appetites have always seemed to me to increase very nearly in proportion to the price of the hay I have purchased for them.

At Concord, I visited the Asylum for the Insane and the State Prison, places at which we would not, perhaps, naturally expect to find much of agricultural interest, for it requires "*sana mens in corpore sano*,"* to cultivate the soil, and good farmers are not to be looked for, in mad-houses and penitentiaries.

But luckily, our accomplished friend, Dr. McFarland, the superintendent, whose recently published "*Loiterings by the Way*," in Europe, evince so much refinement of taste in all matters pertaining to the fine arts, is not only "a scholar and a ripe and good one," not only a thorough master of the various branches of professional knowledge, which enables him so skilfully to "minister to a mind diseased," but judging him "by his fruits," he has also an excellent perception of what belongs to good husbandry. The Asylum stands on an eminence which commands an extensive and beautiful view of the valley and surrounding highlands of the Merrimack. A good set of farm buildings, an extensive field under fine cultivation, and some of the best specimens of thorough bred cattle in the State, bear witness to the idea which is fast gaining ground among the intelligent minds, that some practical attention to improved husbandry is by no means inconsistent with the most studious pursuit of professional life.

At the last State Fair, two or three premiums were awarded to the Asylum for the best exhibition of Ayrshire cattle, and I think, from the slight attention I had time to bestow upon it, that the Asylum farm may soon successfully compete with the best in the State, for the first prize. Scientific knowledge, in agriculture, everywhere makes its record on the green hill-sides, and the waving grain-fields of the valley. We are happy to enroll the name of Dr. McFarland, who is the presiding genius of the whole establishment, within and without, in the list of scientific cultivators of the soil.

At the State Prison, for various reasons, agricultural pursuits are not much in fashion. In the first place, very few intelligent farmers go there, the paths of good husbandry not leading in that direction, and then it would be altogether too agreeable a pursuit for the successful candidates of the third house, at the Capitol.

Formerly, land attached to the prison was cultivated by the prisoners, but, as the warden informed us, the force requisite to guard the gang while at work, could accomplish twice the labor in the same time, and so the poor wretches are shut up from the green fields, and the gentle air of Heaven. They have little care, however, for such matters, and never had, or they would now be in the enjoyment of them, with their liberty, like other men. Deprivation of liberty seems not to impair the health, for not one of the whole hundred was ill, or had been for weeks. And the warden, Mr. Dow, who seems admirably to fulfil the duties of his responsible position, informed us, that there was seldom a prisoner received, who could not read or write, and none was ever discharged, without being taught those branches, at least before

* A sound mind in a sound body.—ED.

his term expired, a fact that tends to prove, either that education is universally diffused throughout our borders, or that we convict an undue proportion of the educated!

Meeting at Concord David Parker, one of the Canterbury "Believers," as they style themselves,—known among the "world's people" as *shakers*, I accepted his invitation to call on them. I suppose their peculiar tenets, and their simple, peaceful mode of life, are well understood by our readers. A quiet, sheltered eddy in the rushing stream of busy life, is this little community.

Two-thirds of the trials of *ordinary* life grow out of the care and vexation, the toil and responsibility, incident to acquiring and retaining what may be deemed an adequate amount of this world's goods, and half the other third arises directly or indirectly from domestic relations, and the exercise of affections, in which the "Believers" profess to have no part.

They have no separate property, and their society is wealthy beyond the fear of want.

They have no care, or responsibility, for food or raiment or shelter, no apprehension of poverty in old age, and the labor is light. They have no wife, or husband, or child, or lover. As a mathematical conclusion, other things being equal, they must enjoy a vastly greater amount of happiness than we unbelievers. But, alas, "the lesson learned so long, so oft, so vainly," must yet be read once more, that freedom from care is not happiness. You see in this community on every hand—in the staid unchanging costume of the men and women—in the utilitarian plainness of their houses, in the absence of all ornaments within or without, *Conservatism* written in characters of ice.

Their husbandry bears the same impress. Heretofore, they have been held up to the world as model farmers, and they have by no means receded in their actual skill in cultivating the earth. Their farms are *now* models of neatness—their gardens and fields are planted and sowed with a care and skill far beyond those of the world around them, they are systematic and thorough in all their operations. They have good judgment and good taste, too, though that is a word not found in their vocabulary, in the selection and rearing of live stock. I noticed among their fine herds of cows, some fine specimens of thorough bred Devons, in the symmetrical forms and bright eyes of which my young conductor, who by the way is a natural born gentleman, however he may have chanced into Shakerdom, seemed to manifest the same interest which we "outside barbarians" should feel in the graces which lie hid under the *unruffled* primness of the short-waisted, straight-sided gowns and coal-scuttle bonnets of their "sisters."

The difference between their husbandry and that of their neighbors is, that the former do everything *as well as they know how*. They lay out no more work than they can thoroughly perform, and their days run on like an eight day clock, and every stroke is at the right time, and *tells* as it should, while we poor harassed outsiders have either "married a wife," or have a baby to tend, to the manifest detriment of all previous well laid schemes. The Believers *do their best* according to their knowledge, and the rest of us *do not*.

Hence they do their common work better than we, but they make very little progress. The *scientific* cultivators among us are far in advance

of them, while the rank and file of the farmers are as far behind. Grafting, and planting, and sowing, were understood in the time of Job, and most of the arts of husbandry were "talked up" as faithfully in Virgil's time as in ours, among the educated.

It is true, that knowledge is more generally diffused among us than it has ever been elsewhere, *but the great obstacle now to improved agriculture, is the want of the general diffusion of knowledge of facts and principles already familiar to the educated farmer.*

In spite of the Procrustes bed of conservatism to which the "Believers" are bound—in spite of the iron cap of *utility*, which is designed to crush down every bump of taste and sentiment, it is quite observable that under the yea, yea, and nay, nay, stiffness and severity of their outer man, there are human feelings—aspirations for beauty, and "something to love" welling up even in the deserts of Shakerdom. Upon my suggestion that a little attention to planting shade trees would add much to the comfort as well as beauty of their ample grounds, the chilling reply was, "Shade trees are not of much use," but soon after we came to a little garden filled with flowers, with a curious frame work carefully erected, sheltered by a roof, with the posts covered with tin, evidently to prevent the ascent of cats and similar blood-thirsty animals. "And what is this," I inquired. My friend, with a good deal of manifest interest, informed me, that it was "a robin stand," a place built up amid the flowers cultivated by "the sisters" for the protection of the small birds, which had gratefully accepted the offering, and filled it with their nests and young.

Among other curiosities, I was introduced to the *oldest shaker*, PETER AYER, who is ninety-two years of age. He was a soldier in the revolution, and like Solomon did not clearly discern the "vanity and vexation of spirit" of "the world," until he had given it a pretty thorough trial. Peter urged me strongly to join the Believers, and in reply to my inquiry whether he did not think he was doing his duty faithfully to his Maker, when he fought for the liberty of his country, he safely said, "No doubt it was all over-ruled for good."

On the whole, to return to my text, there is not *enough*, in this community, to develop mankind, physically, morally or intellectually. It is not the place to *raise great men*, which is no disparagement, inasmuch as they make no pretensions to raising *any*. Their life must be monotonous and wearisome. I cannot believe that enough of spirituality can be developed in so dull and unemotional a mode of life, to satisfy the cravings of the human heart.

However, as I told Peter Ayer, if they would pay a little more attention to architecture and landscape gardening, and cultivate the social affections more assiduously, I don't know but I should be willing to wear long hair and a badly-fitting coat, and join them when I am *old enough*.

My ink has already flowed too freely, and without further attempt to find an end to my subject, I will make an end of my letter.

Your friend,

H. F. F.

RECLAIMING MEADOWS.—In our recent brief suggestions of work to be done in August, we made some remarks upon reclaiming meadows. In work-

ing over a meadow where portions of it are too soft to allow the team to pass over it, good work may be done by covering such spots with loam, sand, chip manure, or even fine gravel. A mixture of these would be excellent, and productive of heavy crops. A depth of two or three inches is necessary—four would be better. After spreading the sand, add finely-composed manure for the seed to catch in.

HOW WONDERFUL IS INSTINCT.

While sojourning at the east a few days last summer, we were informed by a friend, who is a close observer in some of the departments of Natural History, that a pair of robins had built their nest and raised their young for several years in succession in an apple tree in his garden, very near the house. He observed one day that the male bird came home to the nest, which contained the young just from the shell, and appeared to be very much excited. The gardener watched the bird, supposing that something had happened. After having made several movements, hither and thither, the bird took one of the young ones from the nest and carried it a short distance, to an oak tree where another robin had just hatched a little brood, and placed it in the nest, and then returned and removed another in the same way. The third, for there were three in the nest, was dead.

The person who observed this transaction, ascertained that the mother robin of the first mated nestlings had been destroyed in a neighbor's garden. This to us is an exceedingly interesting fact connected with the prescience of instinct, if we may so speak. That there is a difference, and a wide one, between reason and instinct, we must fully believe.

It requires a clear minded metaphysician, like Coleridge, to distinguish readily between all the acts of reason and understanding, as between the manifestations of reason and instinct. How did this male robin know that he could thus remove his little remaining family into a neighbor robin's house? This should be a lesson to some of that species of animals that monopolizes reason, and call themselves Christians, yet, unlike the robin, shut their doors against the orphan and the poor.—*Rural New-Yorker.*

WEIGHING POTATOES.

The law at present requires potatoes to be weighed and sixty pounds to be given for a bushel. When this law is observed, both buyer and seller should be mindful of certain things. A bushel of large, handsome carters fully ripe will weigh about fifty-six pounds. A bushel of the round, flesh-colored or Burr potatoes, large and small mixed, from eight to twelve pounds more. A bushel of assorted potatoes will weigh less than when they are taken of all sizes. In sale by measure, the farmer loses very little by separating his potatoes. If from twenty bushels as ordinarily taken from the field, two bushels of the smallest ones be taken, the remainder will measure about nineteen bushels; but by the present law a measured bushel of all sizes will cost the purchaser several cents more than one of all large tubers, the nominal price being the same. It is sometime since we have weighed a bushel of potatoes and we may not be

right in the weight of the different kinds, but the principle is correct, and we think worthy of attention.—*Culturist and Gazette.*

STATE BOARD OF AGRICULTURE.

The second meeting of the Massachusetts Board of Agriculture was held at the Council Chamber, in Boston, at 10 o'clock, August 5, 1852.

The records of the first meeting were read by the Secretary, after which he announced that he had been officially notified of the election of WILLIAM PARKHURST, of Petersham, to fill the vacancy in the delegation from the Worcester West Agricultural Society.

All the members of the Board were present except the Lieut. Governor and Messrs. HITCHCOCK, LAWTON and PARKHURST; SETH CALDWELL, Esq., of Barre, appearing as a substitute for the latter.

Mr. WILDER, from the committee appointed to consider the subject of appointing a Secretary, and defining his duties, submitted the following report:

The undersigned, a committee of this Board to prescribe the duties of its Secretary, and to present the name or names of a person, or of persons, suitable for that office, having attended to the subject, REPORT, as follows, upon—

THE DUTIES OF THE SECRETARY.

1. To make a faithful record of the meetings of this Board.
2. To keep a journal of all important communications, made to or by the Board, in relation to the progress of his and their labors, and of the art and science of Agriculture.
3. To open and conduct a correspondence with such practical and scientific cultivators, or other eminent individuals, and with such Agricultural Associations in our own country, and in other lands, as may be deemed expedient.
4. To collect Agricultural statistics, pamphlets and publications; to catalogue and arrange the same, together with such books, maps, charts, documents and other articles, as may be given to or acquired by this Board, in a manner convenient for reference and consultation.
5. To obtain and preserve, so far as may be found expedient, and as may be deemed convenient for examination by our farmers, such seeds and specimens of the various grasses, grains, vegetables, fruits and other agricultural products, as are now grown in this commonwealth, or as may be, hereafter, introduced into it, and to distribute such new or approved varieties of these, as may be adapted to its soil and climate.
6. To collect and disseminate such information in relation to the best breeds of domestic animals, and the management of the same, as may be suited to promote this most important branch of husbandry.
7. To investigate, as far as practicable, the elements and character of the soils in this State; their adaptation to different crops, and to preserve for exhibition and instruction samples of the same.
8. To endeavor to discover and successfully to apply, such mineral, vegetable and animal fertilizers, as may be found within our territorial limits, or as may be profitably introduced from other localities.
9. To receive, preserve, and under the direction of this Board to report upon, such approved agricultural implements as are now in use, or as may be, hereafter, advantageously introduced among the farmers of this commonwealth.
10. To visit, by the advice of this Board, the various agricultural districts of Massachusetts, and to give lectures on the practice and science of Agriculture, whenever and wherever they may deem the same most desirable.
11. To attend, as far as practicable, the Exhibitions of the incorporated Agricultural Societies receiving the bounty of the State,—to receive their returns,—to make an Abstract of the same for publication, in connection with his Annual Report, and to perform such other duties as are specified in the act establishing this Board.
12. To co-operate with the Secretary of the Board of Education, so far as may be found expedient, for the introduction and study of Agriculture and kindred branches in the educational system of the commonwealth, and finally, to promote the objects of this Board by such other ways as he may suggest, or they approve.

Your committee having considered the duties above named as naturally pertaining to the office of the Secretary of this Board, next attended to the other subject committed to them, viz., that of designating a person for the office.

The qualifications of several distinguished gentlemen have received the favorable consideration of your committee, and they are happy to report that after mature deliberation, they unanimously recommend EDWARD HITCHCOCK, President of Amherst College, as a gentleman eminently qualified to receive this trust, and to discharge the duties of the office.

All of which is respectfully submitted.

MARSHALL P. WILDER, *Chairman*.

On motion of Mr. GRAY, the report was adopted, and the Board proceeded to ballot for a Secretary. Seventeen votes were given in, all of which were for EDWARD HITCHCOCK, of Amherst.

The Secretary was then instructed to inform Dr. Hitchcock of his election.

Mr. PROCTOR, from the committee appointed to select subjects relating to agriculture most worthy of attention, submitted the following report, which, after considerable discussion, was accepted.

The committee who was instructed to make a selection of subjects for the consideration of this Board, pursuant to the provisions of the 8th section of the statute, are of the opinion that a plain, direct discussion of practical subjects, in a manner that will commend itself favorably to practical farmers, should be at the foundation of all our movements. Not that we would undervalue scientific investigations and speculations; but because they are not so useful to the farmer, as well digested practical suggestions. There is no department in the culture of the soil, where there is not much to be learned. There is no department, where there is any thing known with entire certainty.

Take any subject and turn it over in the mind carefully, and every new revolution will develop some thought, that had not before occurred. So far, therefore, from there being a want of subjects to be treated, the superabundance makes it difficult to select those which will be most appropriate.

At present, before a complete organized movement of the Board is settled upon, it is believed, that it is a duty we owe the cause entrusted to our care, to enter the field *individually as workmen*; and each one to take hold of the part assigned, and perform it as best he may; to be, in truth, a hive of *working bees*, and not of drones. It is not enough to think of what is to be done by the Secretary that may be appointed: but we should think of what we ourselves can do, and when this is done there will still remain enough to be done by a Secretary. Let there be assigned to each individual of the Board, some agricultural topic, on which a report will be expected from him, on his own responsibility, at our meeting in December. These reports, together with the reports of the committees to the several societies, and the returns from these societies; will together constitute a mass of material, which, when properly digested and arranged by the Secretary, will be worthy the attention of the Legislature and of the agricultural community.

As an illustration of what we mean, we would refer to the reports submitted by the voluntary Board of the last year. Will any one say that either of the topics then discussed was exhausted. We presume those who wrote would not entertain this opinion. On the contrary, what was then said, only paved the way for saying something more and better when opportunity should offer.

With this view we present a list of 21 subjects, to be chosen by an assignment to individuals of the Board, in such a manner as may be most agreeable; with liberty to exchange, so as to adapt these subjects to the experience of those who treat them. Selected as we are with a duty to perform, it is respectfully suggested that we are not at liberty to decline this service. It is important to begin our work in a manner to command the favor of those we serve.

Upon motion of Mr. WOOD, it was then voted that each member of the Board be invited to present a written essay upon some one of the subjects mentioned in the report just adopted, or some other subject agreeable to him, and submit it to the Board at its meeting in December next.

The following assignment of subjects was then made, viz.:

1. On the application of science to Agriculture.
EDWARD HITCHCOCK.
2. Education of the young farmer.
SIMON BROWN.
3. Root crops—the dangers to which they are exposed from blight, insects, &c., and their comparative value.
J. W. PROCTOR.
4. Best method of laying down land to grass and continuing the product.
FRANCIS BREWER.
5. Pasture lands—best method of renovating and improving them.
AMASA WALKER.
6. Cows for dairy purposes—how to be selected, and the most advantageous uses to be made of their milk.
WILLIAM PARKHURST.
7. Wheat—the expediency of its cultivation in Massachusetts.
H. W. CUSHMAN.
8. Apple orchards—how shall they be preserved and kept in bearing condition.
J. C. GRAY.
9. Winter fruits—the best varieties and modes of preservation.
M. P. WILDER.
10. Manures—their preparation and application.
JOHN A. NASH.
11. Plowing—comparative advantages of deep and shallow plowing.
STEPHEN REED.
12. Subsoil plowing and drainage.
B. V. FRENCH.
13. Irrigation—The expediency of its application.
JOHN W. LINCOLN.
14. Birds—expediency of preserving.
J. H. W. PAGE.
15. Neat stock—breeding and management of.
SETH SPRAGUE.

The remaining six subjects reported by the committee were not assigned.

Messrs. FRENCH, LINCOLN and FESSENDEN were appointed a committee to recommend three persons as members of the National Agricultural Society.

The Board then adjourned to meet at the State House on the first Wednesday in December next, at 10 o'clock.

CORN AFTER BUCKWHEAT.—The editor of the *Middlesex Farmer* is of opinion that it is not well to plant corn after buckwheat. He says "there is some property in buckwheat that seems to poison the soil, or at least render it unfit for corn." That he has tried it and noticed the results in other fields, and there has invariably been a light and uneven crop of corn.

For the New England Farmer.

THE OAK PRUNER.

SMOKE BROWN, Esq.:—Dear Sir,—The ground beneath black and white oaks is often observed to be strewn with small branches, neatly severed from the trees as if cut off with a saw. Upon splitting open the cut end of the fallen branch, there will be found a longitudinal perforation, containing a whitish grub, which is the author of the mischief. This grub subsequently becomes a chrysalis within its burrow, and finally is transformed to a slender, brownish beetle, covered with a close gray nap. The history of this insect was first made public in the year 1819, by Professor Peck, in the fifth volume of the *Massachusetts Agricultural Repository and Journal*, where the beetle is figured. There is a figure of it also in Emerson's edition of *Johnson's Farmer's Encyclopedia*, plate 16, No. 1. The scientific name of this oak pruner is *Stenocorus (Elaphidion) putator*.

The amount of mischief done by the oak pruner is often very considerable. Branches five or six feet in length and an inch in diameter are sometimes cut off by it. The branch which you sent to me is only three-quarters of an inch in diameter at the cut end. The worm within it is undoubtedly the same as the oak pruner above named.—In your note to me, you inquire whether this insect be the common apple-tree borer, and you remark that you have seen branches of apple trees cut off in the same manner. This last fact is entirely new to me. It suggests the importance of examining the cut ends of the fallen apple-tree branches, in order to see whether they are perforated, and whether they contain grubs like the oak pruner. The latter is correctly classed among borers; but it is not the same in kind as the common apple-tree borer, differing remarkably therefrom, not only in size, form, and color in the beetle state, but also entirely in its habits. Though apple trees may require pruning at this time of year, and some of the branches may bear shortening a little very well, most people would prefer to do their own pruning rather than to leave it to the indiscriminate labors of an insect, which would consult its own taste and wants instead of the judgment of an experienced workman. The insect, it is true, displays no little skill in its performance; a skill without intelligence, however; a kind of mechanical "second nature," wherewith it is admirably and wisely endowed for its own well-being. This is made manifest in every stage of the insect's life. In June or July the parent beetle lays her eggs, depositing them singly close to a leaf, a spur, or a little twig. The grub hatched from the egg, bores at the spot, directly into the branch, and penetrates to the pith, and then makes in the latter a longitudinal burrow several inches in length. Having come to its full size in the course of the summer, the grub then proceeds to cut off the branch transversely by gnawing away the wood from within, but leaving the bark untouched. Then retiring into the bottom of its burrow, it awaits the fall of the limb, which yields to the force of the wind, and is borne to the ground, loaded with leaves that break the shock of its fall. The grub remaining unhurt and secure in its burrow, survives the winter, and is not transformed to a beetle till the following spring. This beetle is about half an inch long, and is provided with two long and taper horns or antennæ. For a more particular descrip-

tion of it, Prof. Peck's account, on the 81st page of my treatise on insects injurious to vegetation, may be consulted. In order to lessen the mischief occasioned by this kind of insect, the fallen branches should be gathered seasonably, and the perforated ends, containing the grubs, should be cut off and burned. This will, at least, prevent the grubs from being transformed to beetles, and will thus check the future propagation of the race.

Yours, respectfully,

T. W. HARRIS.

Cambridge, July 3, 1852.

SAVE THE BEST SEEDS.

The season has arrived when some of the seeds are ripe, and a little care is necessary in their preservation, not only to secure them from waste, but to preserve only the best for future sowing. Farmers never think of raising a puny, badly-formed calf, pig or lamb to be kept as a breeder, but make all animals pass the scrutiny of a severe judgment before they decide to propagate from them. The preservation of *early*, large and perfect seeds for continuing crops is no less important, than that of retaining the most thrifty and best-formed animals.

A gentleman in Maryland gathered the *earliest* and largest heads of wheat from a field and sowed them, gathering the best and *earliest* of their produce and sowing again, and continued the process three or four years. In a recent visit to that State we collected some heads which are now hanging by us, and measure, beard and all, 10 inches in length; the grain heads being 5 inches.

This wheat is known by the name of the CODE WHEAT, taking the name of the gentleman who had by his pains increased the quantity and quality so much. We cut the samples before us from the farm of THOMAS BLADGEN, Esq., of Washington, one of the best cultivators in that region, and who is setting the Marylanders a fine example.

A gentleman in Essex county went through a similar process with onion seed, until seed of his raising readily sold for *four dollars* a pound, while common seed was selling at fifty cents. The great improvement in the crop from these seeds justified the cultivator in paying this great price.

In our farm stock there are always some who grow up rapidly and strong, taking the lead in health and vigor from the first. It is so with plants. A proper consideration has not been given to this fact.

There will be a succession of seeds coming to maturity until the Indian corn harvest is over, and we are confident that more attention to this point will give us better crops hereafter.

ERRATA.—In the monthly *Farmer* for August, page 348, article "Lusus Naturæ," read "*Nerium splendens*," for *Neriusse splendour*. On page 365, in the quotation at the top of the page, read

"Of some great *admiral*,"

instead of "some great *amoral*."

For the New England Farmer.

WHITE WHORTLEBERRIES.

MR. EDITOR:—I send you a box containing a quantity of *white whortleberries*, that you may see the kind of whortleberries that grow in Mansfield. There is a patch of them in the woods, about three-fourths of a mile east of Mansfield Railroad station-house. They have grown there from time-immemorial. They are surrounded by the black kind, in close continuity, without being mixed at all: that is, they are surrounded by the black whortleberry, but none are intermixed in the patch—there is no amalgamation. The blossoms are white, and appear the fore-part of June. The black kind have red blossoms. The leaves, bushes and all about them are exactly alike. They are real *Albinoes*.

Hayward, in his *Gazetteer* of Massachusetts, mentions them, to which I refer you. I have not the book at hand.

I intend to plant the seed to see whether they will produce the same kind. I apprehend not. The late Dr. Roland Greene dug up some of the vines to set in his garden, which grew well and bore well.

Yours, &c.,
Mansfield, July 3, 1852.

ISAAC STEARNS.

P. S. The sample I sent you are not very nice, as the dry weather has injured them, and as I had engaged a person living in the vicinity to pick them when ripe, but he has picked them before they were really ripe, as you may see that many green ones are among them. He was afraid others would pick them if he did not, as they are much sought after. If I can have a better lot by and by I will send them to you.

I would state that there are a few of another kind of white whortleberries about a mile east of the above, which grow on bushes exactly like the sweet blue kind—the berries taste like them, but have a slight reddish tinge.

I. S.

REMARKS.—The berries mentioned above we received in good order, were handsome and of very fine flavor. We hope they will be cultivated, and made plenty, as such fruits are wholesome and eagerly sought after.

DEATH OF A. J. DOWNING, ESQ.

The melancholy death of this gentleman will be sincerely mourned not only by his personal friends, but by the thousands who have become acquainted with him through the medium of his writings. The following just tribute to his talents and worth is from the *N. Y. Tribune*:

Among the victims by the destruction of the Henry Clay there is none whom the country could so ill afford to lose or whose services to the community can so little be replaced as Mr. Downing, of Newburg. A man of genius and of high culture, thoroughly disciplined in his profession by long study and observation in Europe; with taste refined and judgment true enough to feel the deficiencies and to know the need of our domestic and especially of our rural, architecture; still in the prime of life and exercising a wide influence by his practical labors as well as by his writings, he is snatched from a sphere of high and beautiful utility, and a successor we cannot hope to find.

What Mr. Downing had done and was doing to improve the fashion of our dwellings, hardly surpassed in value his contributions, theoretical and practical, to the kindred art of landscape gardening. Under his directing hand the grounds of the Capitol and the Smithsonian Institute at Washington were being transformed into models of beauty in their kind; and the grounds about many private mansions also bear testimony to the same taste, the same wise sense of beauty and fitness.

As a writer Mr. Downing was remarkable for a mixture of strong sense, thorough understanding of his subject, and genial originality. The cessation of his monthly essays in the *Horticulturist* will leave a permanent blank in the literature of the Domestic Arts. While he drew his materials from the most varied culture, he was always, and in the most frank and manly way, an American. His chief aim was to refine the taste, and elevate the social life and habits of his countrymen to something like the ideal proper to freemen. An artist, a scholar and a gentleman, we deplore his untimely loss; and a wide circle of acquaintances, who with us recall his eminent social as well as public qualities, will join with us in this tribute to his memory.

For the New England Farmer.

AN EXPERIMENT—THE BORER.

MR. BROWN:—Your correspondent, "E. M.," has discovered either a new species of apple tree borer, or that the old is making "progress" in iniquity, by *sawing* as well as boring.

In relation to the common borer, I wish to say, that three or four of my young apple trees, from three to four inches through, were found in the spring to exhibit evidence of deep infection, and shortly the leaves began to fade, and I almost gave them up for lost. As an experiment, I piled earth in the shape of a cone round them, to reach some inches above the entrance holes, and with the shovel patted it hard. The object, to exclude the air, and so kill the borer, or oblige him to loose his hold. One valuable tree was full of apples, of the size of a walnut. They all dropped off, with most of the leaves. To my surprise, in July new leaves came out, and on the 19th new blossoms. This tree, as well as the others operated upon, have recovered, and I have strong grounds to believe I shall save them all.

J. P.

Keene, N. H., August 1.

REMARKS.—Simple experiments sometimes produce most beneficial results. The steam engine, our farm implements, and in fact most that we know has sprung from a series of simple experiments. A few years since it was scarcely believed that our most forbidding swamp-lands were good for anything, while now we are getting the heaviest crops of English hay from them. Some one with a progressive spirit made the experiment of reclaiming, and it has proved of great value to most farmers. The borer is an exceedingly vexatious and destructive creature. While we write, one of them is wriggling about upon our paper, which we have just extracted from the branch of an oak.—Although three-fourths of an inch in diameter, he

had sawed it entirely off, and then marched up the branch an inch and about one-eighth of an inch under the bark. Hundreds of branches sawed off in this manner are scattered under the oak trees. We also have before us a young apple tree cut off in the same manner. The insect resembles the common apple-tree borer; that from the apple tree is about half an inch, and that from the oak nearly an inch in length.

For a description of this grub, the reader is referred to Dr. HARRIS' excellent work on Insects, and also to a letter from him in another column.

For the New England Farmer.

GRASS CULTURE.

It is not my purpose to tell a great story, of a great crop—but simply to state what a plain, practical man has done, and what other men like him can do. My neighbor, STEPHEN BLANEY, has a field lately taken from the pastures of Salem, surrounded by hills, rocks, swamps, and other appendages, not very inviting, on which there grew, in 1851, not more than half a ton of ordinary hay to the acre. The land is flat, rather moist, requiring some small drains to carry off the superfluous moisture. In September of the last year, he plowed this land eight inches deep, and turned the furrow slice flat. He then pulverized the surface, and applied a dressing of well-rotted manure, not exceeding four cords to the acre. He then sowed herdsgrass and red-top, and levelled the surface. He is now mowing the crop, and obtains from two to three tons of hay to the acre,—of as good quality as can be desired. Thus his land, within twelve months, has been brought from a worthless condition, to yield a crop worth at least forty dollars to the acre; and this, without any extra expense, or extra effort. Without doubt there are many other instances of culture, equally successful; but heretofore, in the usual manner of culture, it has taken three years, at least, to bring land into a condition alike productive. *First*, a crop of corn or potatoes. *Second*, a crop of barley, oats, or other grain. *Third*, the crop of grass—and this generally, *clover*, of much less value than the crop of which we have spoken.

What is the secret of the success of Mr. Blaney's culture? *First*, complete pulverization of the surface; *second*, complete preparation and intermingling of manure. Where small seeds are expected to vegetate, these conditions are indispensable.—Suppose he had taken the same quantity of manure from his barn-yard, and spread it upon the land, in lumps, three or four inches in diameter, and cross plowed and harrowed the land, as is ordinarily done, it is safe to say his crop would not have been worth half as much. Here then the application of labor of the value of *three dollars* to an acre, has increased the income at least *twenty dollars*. Might not our farmers do the same thing with other crops, as well as with their hay? Are there not hundreds of acres that do not now yield a crop of the value of *ten dollars* per acre, that could be made to yield crops of the value of *forty dollars*?

I saw, yesterday, a field of rye on our town farm, of four acres, the product of which will be not less than one hundred and twenty bushels:

this land has not yielded annually grass enough to feed one cow. The point to which I would direct attention is, greater care in cultivation—*less land and more labor*, if you would have labor well rewarded.

Danvers.

MY FATHER'S HALF-BUSHEL.

My father's half-bushel comes oft to my mind,
And wakens deep feeling of various sorts;
'Twas an honest half-bushel, a noble half-bushel;
It held a half-bushel of thirty-two quarts!

When I think of that bushel,—my father's half-bushel,
That dear old half-bushel, so honest and true,
Then look at the bushels, our city half-bushels,
Little dandy half-bushels,—it makes me feel blue!

O, my father's half-bushel, that country half-bushel,
Say, when, with blest vision, its like shall I see?
'Twas a blessed half-bushel, and he was a true man,
For he filled his half bushel, and something threw free!

Yet all the half-bushels, if mean, are not small;
I'm vexed with the great ones the most, after all.
O, mark out that ashman's, next time he shall call;
'Tis a monstrous half-bushel—holds quarts sixty-four;
So send the base rascal away from your door!

'Tis a fact I am stating—no slanders I utter—
But who can forbear, when cheated, to mutter?
In New York, a barrel—I pray you, don't laugh—
Will not hold so much ashes as potatoes by half!

O, what are the lawyers, and what are the laws,
But bugbears and phantoms,—mere feathers or straws!
Unless our half-bushels are all made as one,
Like father's half-bushel, I say, we're undone!

Journal of Commerce.

SPEECH OF ABBOTT LAWRENCE IN LONDON.

The Royal Agricultural Society of England had its great annual dinner at Lewes, on the 15th inst. Among others present, was the American Minister, Hon. Abbott Lawrence, who made a short speech. He said:

My Lords and Gentlemen—I have the honor of submitting to you a toast, and that toast is one of very extensive significance. It is no other than "The Agricultural Societies throughout the World;" and I give it with the more pleasure because I know that the operations of the Royal Agricultural Society of England are bounded only by the horizon. I know that your premises are open to all the world. I know that my honored colleagues on both sides of me—each representing a farming country—their stock and their implements—may come here and compete with yours. I say, then, that the science which has been and is applied to agriculture in England is like all other scientific pursuits—it knows no limits. I honor this society, then, for its liberality; and on the part of my country I desire to present my thanks to you for the great benefits we have derived from your publications and experiments. (Cheers.)—Between our two countries there never was any reason—at least, any true reason—for feelings of alienations; and if I could have my way—if I could govern and regulate matters, *with the aid of my friend on the right, (Lord Palmerston.) with the kind feeling which I know to exist in the heart of another eminent individual who occupies a seat in the present Cabinet, we should never have war or even rumors of war more.* (Vociferous cheering.)

THE ATMOSPHERE.

The atmosphere is mainly composed of two distinct gases, which are invisible but not imponderable bodies, and everywhere surround the planet like an ocean. It has a mean depth of some forty-five miles. The gases which form the air are called *nitrogen* and *oxygen*. According to the accurate analysis of dry, pure air, made by M. M. Dumas and Boussingault, 100 parts consist of 20.8 oxygen and 80.2 nitrogen. These chemists found from 2 to 5 parts of carbonic acid in 10,000 of atmospheric air. Dr. Fresenius has ascertained that the proportion of ammonia in the atmosphere is as 1 to 2,000,000, varying to 1 to 3,000,000. Undoubtedly there are many other volatile and gaseous bodies in the atmosphere, in a state so extremely diluted and diffused as to escape all chemical tests. Sir Robert Kane found that sulphureted hydrogen will pass through a thin piece of India-rubber into the atmosphere, against a pressure equal to 50 times the weight of common air. Gaseous compounds of phosphorus, chlorine, and sulphur, are constantly discharged from decaying animal and vegetable substances into the atmosphere. These gases fall to the earth again in rain-water. It is one of the laws peculiar to all gases, that the presence of one in any given space does not in the least prevent several others from occupying the vacancies left between atoms of gas that seem to repel each other with singular aversion. The facility with which the atmosphere takes up vapor when water evaporates, is familiar to all. This capacity to hold immense quantities of water imbibed from the ocean, lakes, rivers, the foliage of trees, and moist earth, in a volatile condition, to be distributed over broad continents, is a wonderful provision of nature. But the filling of the air with water, like a wet sponge, is less remarkable than the contrivance for *squeezing the sponge*, so to speak, and causing the diffused moisture to fall in gentle rains, snows and dews. The drying of the atmosphere, after it is saturated with water, is a phenomenon, without which it would never rain; nor could there be any springs, rivers, land plants or animals on the globe. This precipitation of water is effected by a change of temperature; which change is the result of the revolution of the earth on its axis, and of solar heat. Day and night, spring, summer, autumn and winter, with their ever varying temperature, varying winds and clouds, and constantly changing humidity, are all results of fixed laws, which invite the research of every reasoning mind.

FATTENING CATTLE IN STALLS AND IN SHEDS.

An experiment has been made in Scotland to try the comparative value of these two modes of fattening cattle. Ten animals having been chosen were divided as equally as possible; five were put in a sheltered court with plenty of shed room, and the others into boxes. At the beginning of October it was soon found that those in the court eat 134 lbs. per day, while those in the boxes eat only 112 lbs., or 22 lbs. less, thus proving that a certain degree of warmth is equivalent to food. After seven months, toward the end of April, they were all slaughtered, and the following results were found:—

Cattle fed in boxes.....	Beef..3,362 lbs.	Tallow..6,678 lbs.
Cattle fed in court.....	Be f..3,416 lbs.	Tallow..5,054 lbs.

These results show the superiority of feeding in boxes. It is thought that in a less mild winter they would have been more striking. In the course of the experiment the thermometer rose to 50 degrees, and the cattle under cover seemed to suffer from being too warm. It was found a trifling expense to comb them regularly, which speedily produced a very marked improvement.—*N. Y. Tribune.*

FLOWERS—GARDENING.

Mr. Charles Dickens has been discoursing very eloquently about flowers at the ninth anniversary of the Gardener's Royal Benevolent Institution.—We give a short extract from his beautiful address:—

"Gardening," he said, "was invariably connected with peace and happiness. Gardens are associated in our minds with all countries, all degrees of men, and with all periods of time. We know that painters, and sculptors, and statesmen, and men of war, and men who have agreed in nothing else, have agreed, in all ages, to delight in gardens.

"We know that the most ancient people of the earth had gardens; and that where nothing but heaps of sand are now found, and arid desolation now reigns, gardens once smiled, and the gorgeous blossoms of the East shed their fragrance on races which would have been long ago forgotten but for the ruined temples which, in those distant ages, stood in their gardens. We know that the ancients wore crowns of flowers; and the laurels and the bays have stimulated many a noble heart to deeds of heroism and virtue. We know that in China hundreds of acres of gardens float about the rivers; and, indeed, in all countries gardening is the favorite recreation of the people. In this country its love is deeply implanted in the breasts of everybody.

"We see the weaver striving for a pigmy garden on his house top; we see the poor man wrestling with the smoke for his little bower of scarlet runners; we know how even men who have no scrap of land to call their own, and will never have, until they lie their length in the ground, and have passed forever the portals of life, still cultivate their favorite flowers or shrubs in jugs, bottles, and basins; we know that in factories and workshops we may find plants; and I have seen the poor prisoner, condemned to linger out year after year within the narrow limits of his place of confinement, gardening in his cell.

"Of the exponents of a language so universal; of the patient followers of nature in their efforts to produce the finest forms and the richest colors of her most lively creations, which we enjoy alike at all times of life, and which, whether on the bosom of beauty or the breast of old age, are alike beautiful, surely it is not too much to say that such men have a hold upon our remembrance when they themselves need comfort."

THE TROPICAL PLANTER—is the title of a new agricultural paper, published at Ocala, Florida. LEWIS C. GAINES, Editor. We like his introduction much, and most other articles in the paper. Those on the culture of tobacco, and the "Farmer's medicine chest," we have no sympathy with. We are glad to see that portion of the

Union awaking to her interests in agricultural matters, and should be most happy to discuss them for a few days with brother GAINES, on his own hearth-stone (we hope he is not a bachelor) on some of those balmy days in Florida next winter, when the winds are howling and the snow flying wildly here.

For the New England Farmer.

GOV. ENDICOTT AN HORTICULTURIST.

BY S. P. FOWLER.

Perhaps it is not generally known, that Gov. John Endicott was probably one of the first persons, who cultivated fruit, and planted nurseries in Massachusetts. And we intend, by this communication, to exhibit a new *phase* in the character of him, whom the gifted Hawthorne styles "The severest Puritan of all, who laid the rock foundations of New England," viz.: that of an *amateur* in Horticulture. In proof of our assertion, of the love he bore for the cultivation of fruits, and for agriculture in general—we find in the first letters he sent home, he requested his friends in England, to send over to him fruit stones, and kernels, grain for seeds, wheat, barley and rye, and domesticated animals. In answer to these requests, a letter was received the 19th of April, 1629, wherein the Company in England inform him, they are disappointed in sending the things ordered, but [God willing] they propose to send them by the next vessel. Rev. Mr. Higginson, the first minister of Nahumkeag, now Salem, who arrived there June 30th, 1629, says, we found abundance of corn planted, and our Governor hath a store of green peas, grown in his garden, as good as I ever eat in England. He adds, he hath already planted a vineyard, also there were planted in his garden, mulberries, plums, raspberries, currants, chesnuts, filberts, walnuts, small nuts, huckleberries, and haws of white thorn. By this we learn, that Mr. Endicott had thus early, made considerable progress in gardening. And it would seem from the observation of Mr. Higginson, that green peas were about as early in 1629 as with us at the present day. It was here in this garden in Salem, he probably planted his famous pear tree, together with other fruit trees; and upon receiving the grant of the Orchard Farm, they were removed there probably sometime after the land was broken up by the plow, which was in the year 1633.—This venerable tree, now probably more than 220 years of age, we visited to-day [Aug. 9th] and found on some of its branches, it had made a growth of some three or four inches this season, although it bears the marks of extreme decrepid old age. I should think it would produce this autumn, a peck of pears, very fair in their appearance. The tree has thorny wood, and was undoubtedly never grafted.

Robert Manning, Esq., in describing the Endicott Pear in Mr. Hovey's *Magazine* for 1837, says in some seasons the fruit is good in quality; but it can only be placed in the second class of table pears. It is ripe in October. We think there is good reason for believing that the Endicott Pear Tree was raised from seed, received with the seeds of other fruit trees from England in 1629, and planted in the Governor's garden at his residence in Salem. And all those young trees, vines, shrubs

and perhaps flowers first planted here, and mentioned by Mr. Higginson, upon his first arrival at Nahumkeag, were after they became of sufficient size, and the soil of the Orchard Farm made mellow by the plow, removed thither. That Gov. Endicott had extensive orchards, gardens, and nurseries of fruit trees, may safely be inferred, from reading his will written in 1650, where he says, "I give to my dear and loving wife, Elizabeth Endicott, all my farm called Orchard, lying within the bounds of Salem, and ye orchards, nurseries of fruit trees, gardens, fences, &c., thereunto appertaining."

In 1648, Governor Endicott appears to have devoted much attention to the cultivation of fruit trees. We find at this period, that he exchanged five hundred apple trees, of three years growth, with a William Trask, for two hundred acres of land! Only think of those sales of the olden times, ye nurserymen of the present day. Two apple trees for one acre of land. Gov. Endicott, in a letter written to Gov. Winthrop in 1643, amongst other things, says "The maid is now going along with us to the Orchard, where your sonne shall be heartlie welcome." That he was in the habit of inviting his friends to visit his grounds, and partake of his fruits, we may also infer, from this letter. And that he possessed the feelings of an *Amateur*, and liked to exhibit his garden to visitors. He doubtless invited this fair Puritan maiden to the Orchard, to be regaled by its fruits, and the *sonne*, it is fair to presume, received his invitation in consideration of the pleasure he might derive from the company of the maid. And it was here in this garden, enclosed by pallisadoes, that the worthy Puritan, with his mustache and imperial, for he wore both, could be seen with the gentle maiden, pacing those shady walks, that extended from his mansion to the banks of the river. Who this maid and sonne were, who were invited thus to receive the hospitalities of the Governor, we are not informed. History, as well as tradition, is as silent as the grave. The young man however might have been Adam Winthrop, the eldest son of Gov. Winthrop, by his third wife, then in his twenty-fourth year.

From a letter sent to Governor Winthrop, dated April 12th, 1631, we find that Mr. Endicott attached more importance to agriculture, than to legislation. He says, "I thought good, further to write what my judgment is, for the dismissing of the Court 'till the corne be sett. It will hinder us that are farre off, exceedingly, and not further you there. Men's labour is precious here, in corne setting time, the plantation being as yet so weak." The value of the crop of Indian Corn has never appeared before to us so great, as it did upon reading this extract. What would the farmers in our Legislature think, when sitting in the State House late in the Spring, to have the General Court dismissed by the Governor, and they sent home to plant their corn, or perform other necessary business on their farms? We are not certain, however, but what this method of closing our long sessions would be an improvement, in our legislation. And we are amongst those, who would like sometimes to see this old custom, like the hat and cane presentation, in our Senate of last winter, revived. The Indians likewise attached great value to the corn crop, and it was considered, in our early wars with them, a great stroke of policy, to

destroy their corn in the field, or prevent its being planted by them in the Spring. In either case, starvation or severe suffering to the poor Indian, was sure to follow.

The Indian corn was about the first thing, discovered by the Pilgrims upon their landing at Plymouth, and their knowledge of it, and its mode of culture, by planting it on the intervale land by the rivers, and in hills, by raising the soil around the crown of its roots, was obtained from the aborigines of the country.

Many are the traditions related by the Indians, in regard to the origin of the Maize or Indian corn. Mr. Neal, one of the early historians of New England, says, "The Indians have a Tradition, that a Crow brought the first Bean, and a Black-Bird the first grain of Indian Corn into New-England; for which Reason, those Birds are accounted sacred by them, tho' they are so mischievous, that the English contrive all ways they can think of, to destroy them." There is likewise a tradition with the Indians, that a beautiful squaw sent by the Great Spirit, once visited them, and with her right hand presented to them the Maize or Corn, with her left hand, she gave them the bean, and seeds of the squash, and from the warm earth on which she sat, after she left them, *up sprung the tobacco*. We must say we are most strongly inclined to believe this legend, at least so much of it as relates to the origin of the Indian weed; it *must*, we think, have been produced in some such manner. The time of planting or setting Indian Corn has not varied for two centuries. Our ancestors usually planted, or as they termed it, set their corn before the assembling of the Great and General Court, which took place the last of May in each year.—There is a tradition that Gov. Endicott cultivated in his garden, at his Orchard Farm, the white weed as a flower, or for medicinal purposes, and that a long time since, it spread into the adjoining fields, and probably may now be found on most of the farms in New-England. For this supposed act, he has received the maledictions of many farmers. That Gov. Endicott might have introduced the white weed into his garden, for its beauty, or for medicinal purposes, we do not deny, for it has been supposed by medical men to possess medical qualities, and we are certain by a reference to the correspondence between two distinguished botanists, Peter Collinson of London and John Bartram of our own country, which passed between them July 20th, 1759, that the white weed has been cultivated in English gardens, as a flower. In the letter referred to, Mr. Collinson says, "The *Leucanthemum*, or ox-eye Daisy, [white weed] overruns some fields. But then it makes a fine show. For this reason, I give it a proper place in my garden,—as I love all flowers." Our own opinion is, that the white weed was brought over from England, with the grass seed first used upon the Orchard farm—when the mowing lands there were first laid down to grass. We are confirmed in this opinion somewhat, from the knowledge we have of this weed, that it is not confined to the county of Essex, or to this part of the country.—It is a fact that the white weed was introduced into Eastern Pennsylvania, with many other worthless plants, unintentionally, more than one hundred years since. We are disposed to close our communication here, and will furnish another article upon the same subject, if desirable. S. P. F.

Danversport, Aug. 9th, 1852.

REMARKS.—The communications of S. P. F. are always acceptable: they are copied into other journals, as they are instructive as well as interesting.

DARTMOUTH COLLEGE.

This honored old *Alma Mater* nullifies the doctrine that "corporations have no souls." Her heart is as expansive as the sunshine, seeking out among the children of men those who have toiled up the "hill of science," and made themselves useful to their kind, and clothing them with her honors, whether they have graduated at any similar institution or not.

Thus we notice that at the recent commencement of this college, the honorary degree of *Master of Arts* was conferred upon our Associate, HENRY F. FRENCH; upon RICHARD BOYLSTON, of Amherst, N. H., and JOHN PRENTISS, of Keene, both veteran editors and printers of that State; and upon BENJAMIN B. FRENCH, of Washington, D. C., but a native of N. H. Never were titles more fitly bestowed. That they will wear them with meekness and grace, and make glad the heart of the "benign mother," we have no doubt.

Well—we shall put on our best behavior and tug on, and who knows but at some future day the honorable Trustees of Dartmouth, or some other College, will add those titillating words—*Master of Arts*—to our own humble patronymic! Who knows!

BONE MANURE.

Bones, though of comparatively recent introduction as a manure, stand at the head of all miscellaneous articles used for this purpose. The improved machinery for preparing them has brought them into extensive use in Europe. In England it has been demonstrated that on dry sands, limestone, chalk, light loams, and peat, bones are a very valuable manure. That they may be applied to grass with great effect. That on arable lands, they may be laid on fallow for turnips, or used for any of the subsequent crops. That the best method of using them, when broadcast, is previously to mix them up in a compost with earth, dung, or other manures, and let them lie and ferment. That if used alone, they may either be drilled with the seed, or sown broadcast. That bones which have undergone the process of fermentation are decidedly superior in their immediate effects, to those which have not done so. That the quantity should be about 20 bushels of dust, or 40 bushels of large, increasing the quantity if the land be impoverished.—*Farmer and Mechanic*.

☞ The article in the *Working Farmer*, for August, on the value of Fruit, and credited to the *Bridgeton Chronicle*, was written for and published in this paper. Another article, "An Old Tree," was from our own pen, gathered from the musty records of English history, and is credited to the *West. Hort. Review*. The *Working Farmer* is strong enough to work its own way, and is very

particular in giving credit to those from whom it quotes. We mention these instances not as a matter of particular consequence, but to show how injustice may be done to some and unmerited credit given to others, by not making the proper acknowledgments in the first place.

For the New England Farmer.

WHAT KILLS THE BUDS AND TREES.

MESSRS. EDITORS:—In one of your late numbers are some remarks under the same caption as this of my present communication. A very important question. In your remarks upon the same subject headed "Effects of the late severe winter upon vegetation," you conclude by expressing the hope that correspondents who have carefully observed these phenomena, will favor us with the conclusions at which they have arrived. And your associate, Mr. French, hopes that readers of the *New England Farmer* will afford opportunity of comparing notes on this matter.

I am not one of "those who have carefully observed these phenomena," and have no notes to compare, and I am sensible that, in expressing an opinion on the subject, I lay myself open to animadversion for speaking without knowledge.

Your correspondent, W. H. H., from Plaistow, intimates his disbelief in the common notion that the expansion caused by the frost is the sole injury done by severe cold. If it could be established that severe cold was the cause of the death of the plant, exclusive of other influence, I should agree with him. Perhaps there are plants that are killed by cold alone. But when a plant is killed or suffers an injury less than death by frost only, I should doubt, as he does, that the injury is effected by the expansion of the sap vessels. Freezing, it is true, causes expansion of water, but not of dry wood. And in the severe cold which is supposed to kill the tree, there is no sap in the vessels. I think the most scrutinizing observation will not detect any expansion of the tree in the coldest weather. If mere cold alone is capable of destroying the life of a plant, I should think it done not by expansion of the sap or of the wood; but that the decay of the spiral vessels, which are those conducting the sap, ensued from the total abstraction of heat, which is the vital element of plants, no less than of animals and of man. When the latent caloric, or natural vital heat of a plant is wholly expended and gone, the spiral vessels would lose their power, would cease to perform their assigned function in the vegetable economy, the sap could no longer circulate, and, with the stopping of the circulation, the plant dies. Such would be my view of the operation of cold upon plants, in cases where it is capable of producing death.

But I cannot think that the cold of last winter was capable of doing this, or of producing death in any other way, be it expansion, or by any other imaginable process;—and this for the reason, among others, that there has been a greater degree of cold in some winters, in this vicinity, than any cold of last winter. It is doubtful if any one among us has known a winter without as great a degree of cold as any of the past winter, though the number of days with the thermometer below zero may have been more than usual. If I am

not mistaken, there have been winters with as intense cold, and even from five to ten degrees less, without producing the same injury to trees. In your remarks upon this subject you remind us of the rigors of the higher latitudes, which produce not such results. These facts furnish a strong argument against the idea that cold alone, or at any rate, that the cold of last winter, was the unassisted cause of the injury.

In one of your late numbers, in a communication headed "Effect of cold on plants," to be found in your May monthly, it is stated that heat suddenly succeeding intense cold is a cause of the death of the plant, by producing inflammation, as is the case with a man who, after having his limbs frozen, is brought at once to a hot fire. This causes excessive pain, and sometimes death or less injury. But whether a man is frozen to death, or dies in consequence of too sudden application of great heat following the freezing, he does not, in either case, I believe, die of *expansion*. In both cases the vessels necessary to keep up the vital functions, lose the power to perform their office; in the one case by paralysis or loss of vital energy, because of loss of vital heat; in the other, by inflammation and consequent mortification, or exhaustion. Such, in the one case, and in the other, I take to be the operation of the same causes in the vegetable department of nature. In the plant as in the animal, life is at first communicated by heat, and while it continues, heat constitutes the vital energy, and, by the activity of the vegetable functions, heat is constantly generated, and, by mutual and reciprocal action, it keeps up that activity, and is necessary to it, and when wholly lost to the plant, life is gone with it.

Such, sir, is my view of the effect of heat and cold upon plants. Perhaps, as you have already devoted several columns to this subject, you may think these remarks, being unaccompanied by any statistics derived from experiment or observation, will not be profitable to your readers. If so, you will know what to do with them. The view is, however, I think, sustained by the analogies of nature in the animal department. It has been proved that the process of respiration in plants is accompanied by a disengagement of heat—and that it is developed in them in the same way as in animals. "It is evident," says Dr. Smith, "that a certain appropriate portion of heat is a necessary stimulus to the constitution of every plant, without which its living principles are destroyed." The young and tender wood of later growth is sooner destroyed than the older wood of trees, not because it *expands* more readily, or to a greater degree, but because its tissues being more delicate and tender, are more easily killed either by cold or by sudden supervening heat, as above described, than the tissues of the older wood. W. J. A. B.

Essex, Aug., 1852.

A RARE CHANCE.—If any of our friends are desirous of sending their boys to an excellent teacher in a pleasant country town near Boston, we can refer them to such, where the operations of the farm and of the animal and vegetable kingdoms are constantly showed in connection with the usual routine of *book studies*.

U. S. AGRICULTURAL SOCIETY.

Dr. LEE, the Secretary of this society, states that the Executive Committee voted \$200 to get out the first number of its Transactions, which will contain an account of the doings of the National Agricultural Convention, and such other matter as may be deemed appropriate and useful to the farming community. That this number will contain 144 pages, appear in August, and that "the best talent in the States is pledged to aid, hereafter, in making the *Journal of the United States Society* an honor to the first agricultural nation on the globe." We are glad to notice this promptness on the part of the committee, and have no doubt the secretary will proceed with a corresponding zeal, in conducting its pages through the press.

We hope that for the credit of the "first agricultural nation on the globe," and for all in any way concerned or interested in the society, that its printing is not to be executed in the usual style of the art at the Capitol. We had rather the *Journal* would never appear, than present itself in such questionable shape. It may be done in Philadelphia, Boston, Rochester, or in many other places, and done well, but we have yet to see the first specimen of elegant printing done at Washington.

This *Journal* should afford a sample of the art of printing as well as of sound opinions upon the subjects of which it treats; commanding the respect of all other professions, while it reflects credit upon those for whom it is more particularly intended.

All persons who are desirous of promoting the objects of the society may do so by becoming members, and may participate in the advantages which it offers, by sending two dollars to WILLIAM SELDEN, Esq., Washington, D. C., Treasurer of the Society, or to Dr. DANIEL LEE, its Corresponding Secretary, who will see that all names are duly entered, and that the *Journal*, seeds, &c., are properly mailed.

The terms of membership now are the payment of \$2 00 annually, but we trust the general government will hereafter publish the transactions of the society and pay its other necessary expenses, and not subject the members who are to furnish the materials for its pages to this annual tax.

✂ We exceedingly regret that Mr. FRENCH, of Exeter, who had consented to address the members of the Hillsborough Co. Agricultural Society, at its approaching Fair, is not able to fulfil his engagement. Mr. French is a man of excellent taste, good talent, and withal a practical cultivator, and would have given the Society much pleasure. — *Granite Farmer*.

REMARKS.—As we understand it, Mr. FRENCH would have promptly fulfilled "his engagement,"

had not the Hillsborough County Society found it necessary to change their time of meetings so as not to come in collision with the State Fair. We regret, also, that Mr. French cannot go to Old Hillsborough, because he is able to do them good service there.

THE LATE A. J. DOWNING.

[We copy from the *Home Journal*, the following just tribute to the memory of Mr. Downing, written by our Associate, Mr. FRENCH.]

Poor Downing is dead. In the dreadful calamity on the Hudson, which brought death to so many, and sorrow to the hearts of thousands more, he, whose name is associated with all that is fresh and beautiful in nature—with the starting grass and fragrant blossoms of spring-time—with rustling leaves and waving branches of summer—with the clustering fruits and yellow harvest of autumn—has perished from the glad and beautiful earth; how much *more* glad and beautiful because of the life of him who has just passed away.

He who, as a prophet, inspired with the very genius of *The Beautiful*, taught us not only the eternal principles of taste, and thus enabled our judgments to appreciate its true manifestations, but also infused into our hearts a genuine love for what is lovely—giving to the eye a new light in the glancing of the moonlit water, and in the rainbow-hue of every dew-drop of the morning—giving to the ear new music, as well in the solemn rustling of the tempest-stricken forest, as in the gentle murmuring of the zephyr through our latticed bowers; he who, by his teachings, thus awakened in us a new life, and so brought us more nearly into harmony with the great Author and Architect of all, has gone out from among us.

He who, as a wise and gentle brother, has "taken sweet counsel" with us, in arranging the "surroundings" of our pleasant rural homes, in the position of every group of trees and every flowering shrub that ornaments the lawn; he who kindly sat with us, and carefully "counted the cost" of our dwelling, planning with singular combination of knowledge and taste, the various conveniences and luxuries of life, showing how far more necessary is a nice perception of fitness and harmony to right enjoyment, than abundant riches; he who has gilded the "refined gold" of the wealthy, by working it out into what has been expressively termed the "frozen music" of architecture, and at the same time has "painted the lily" and thrown "a perfume on the violet" for the poor and lowly, by enlightening their minds and filling them with new perceptions; he, our master and our friend, suddenly is "blotted from the things that be."

And yet how little of such a man can die. To his family, to his immediate circle of personal friends, and those who met him in the daily walks of life, it is indeed death, in all its dread reality. With them, "each heart knowing his own bitterness," and with their sorrow "the stranger intermeddled not." But to us, who chiefly knew him through his written teachings, and have him still with us in the pages of his "Landscape Gardening," "Cottage Residences," and "Country Houses," in his "Fruits and Fruit Trees," and "The Horticulturist"—to us, to the world, to posterity, *he still lives*.

We mourn for one who, in his department of knowledge, stood confessedly above any other on this whole continent—a man who came to us, not like most great minds, too early to be appreciated or even recognised, or too late to be useful, but who came and was welcomed just when the inhabitants of this western world had laid down the woodman's axe, and were anxiously waiting for lessons which should enable them to advance from the stern and rigid principles of mere *utility*, to the higher and more graceful pursuits of science and of art—from the rude cabin of the settler, to the vine-sheltered cottage or more lofty dwelling of the artist and the scholar. This man, we are told, *is dead*: but still he stands forth, for us, pre-eminent as if yet among the living, patiently, as heretofore, in his written words, replying again and again to our inquiry, How shall we make the earth more beautiful, and humanity more pure?

Philosophy has suggested that the impress of objects perceived by what we term *sight*, is constantly repeated, projected, again and again, into space, travelling with the rapidity of light, to be intercepted, perchance, thousands of years hence, by the refined senses of mortals even, translated to distant spheres; so that nothing, whether it be a material atom, a note of music, or the reflected image of a flower, which has once *been*, can ever cease to be. The thought, however fanciful, is pleasing in connection with the memory of one whose life has been successfully devoted to the creation of beauty all around. How these daguerreotypes may have filled all space, and eternity itself, with his beautiful creations!

And now the trite question, usually so easily answered, when one has gone who occupied a large space in the public mind, will be heard, "*Who shall fill his place?*" The answer to this inquiry has already been suggested: *His place is already filled*. The niche in Fame's Temple for him who should develop a new world, in the pursuits of "*Rural Life and Rural Taste*" in America, like that for the discoverer of a continent, can contain *but one statue*.

In early manhood he has fallen, but not, indeed, before he had finished a *life-work*, and we who lament what seems, at first, his *untimely* fate, should remember that *true* life is not measured by vibrations of the pendulum, and that "his life is long which answers life's great end," whether it be drawn out to three score years and ten, or ended, like his, when scarcely half those years have passed away.

And now, what eulogy for the dead? what monument to the memory of our friend departed? *This* work is also finished. Throughout the length and breadth of our country, wherever the air is fragrant with the perfume of cherished flowers, or murmurs through cultivated groves and gardens, it breathes the praises of him whose spirit, more than any other, has refined the taste, and whose knowledge guided the hand of the cultivator, and the winds which sweep over our forests—"those grand old woods" of oak, and pine, and hemlock—already celebrate the fame of him who boldly asserted their right to the first rank in the world's catalogue of the majestic works of nature. His monument! Is it not already on every hill-top and in every valley, in every town and every village, where Gothic art expresses, with its vertical lines, in lofty towers and pointed arches, aspiring

Hope and all-embracing Love—where the encircling, overspreading, all-uniting dome of Roman architecture illustrates, in public halls and capitols, the sentiments of patriotism and unity?

He has indeed "erected a monument more enduring than brass." His memory! Is it not already beautifully entwined with the vine that encircles the stately columns on the banks of our noble rivers, or hangs from the humble porch of the tree-sheltered cottage? Who among us has built him a house, or planted a vineyard, or reared a rare flower, uninfluenced by his taste? Who, in town or country, does not cherish an abiding sentiment of gratitude and love towards one whose life it was to refine and elevate the hearts of men, turning them from gain and worldliness to the appreciation of the beautiful in the works of Him who has not in vain, for his creatures, spread out the landscape, and made the woods vocal, and the air fragrant? No; of all who have thus suddenly perished,

"He will not float upon his watery bier
Unwept."

With no desire to sketch his every-day life, or coldly to analyze his character as an author or an artist, but under the first impulse of the mingled feelings of sadness, of affection, of bereavement, which must find a wide sympathy throughout our country, as his melancholy fate becomes known, this notice of our departed friend has been written.

"HEAVEN KEEP HIS MEMORY GREEN."

A MODEL FARM.

We take pleasure in referring the reader to an account on another page of a visit of several gentlemen to Mr. MECH's farm at Tiptree Hall, Essex Co., England. Among the company present, numbering about 250 gentlemen, was our Minister to England, the Hon. ABBOTT LAWRENCE.

The feature in the account which affords us the most pleasure, is the expression of those fraternal feelings which are springing up rapidly in the citizens of the two countries. We thank Mr. Lawrence, in the name of the American people, for the assurances he has often given the English people that there is no settled hostility among us to that great nation; and "that we are naturally proud of our connection with her, and should the time ever arise when the mother country is oppressed by fear or other cause, she may rely upon the assistance of her daughter." We feel confident that the British government is earnestly desirous of maintaining the most friendly relations with us, and that they will not allow the present fishery question, nor any other, to disturb these relations. We cannot doubt, for a moment, that our own government will act in regard to all questions between us with generous considerations and the strictest integrity.

There was once a deep-seated prejudice between the citizens of both nations, but happily is fast dying out, and replaced with feelings of sincere regard and confidence in each other. The *London Times* has spoken most unequivocally in several of

its leading articles during the last year, in relation to the common interests of the two countries, and avows the opinion that they ought to be indissolubly connected in every thing that relates to the welfare of each. Some of our own papers have met this feeling in a kindred spirit and have spread it broadcast among our population. That it may take deep hold of all hearts in each land ought to be the desire of every son and daughter of this free country; that it will be the means of averting wars, and ages of oppression, we have no doubt, and therefore hail this new advent of peace with unmingled gratification.

The agricultural meetings in both countries will do much to promote these enlightened and Christian views, and strengthen the bonds of affection, as well as interest, between the two leading nations of the earth.

For the New England Farmer.

THE "NEW DEPRDATOR"—OAK PRU-NEER.

[The following communication was received after the late letter from Dr. HARRIS was printed, and we have therefore omitted a considerable portion, as it had particular reference to the insect as described in the work on "Insects Injurious to Vegetation." The writer states that his father "noticed it forty years ago, and has seen more or less of it ever since."]

MR. BROWN:—One reason why they are called "new depredators," is because in years past they have operated to a small extent and have not been noticed by all, but *this year* they are very numerous; even the "oldest inhabitant" cannot tell when their ravages have been so great. They are not confined to the oak, but prey upon the apple, cherry, walnut, sugar-maple, &c.; within a few days I have found the tops of sugar-maples, three-fourths of an inch in diameter, sawed off—on the ground, blown down by the winds; I have picked out quite a number of the "sawers" from the branches that have fallen, and found that they vary in length from half to three-quarters of an inch. Out of the wood they seem to have no powers of "locomotion;" for one that I laid on a wall remained there over thirty hours, until it died, without moving half an inch from where I put it; it could only turn over. They are truly formidable looking "animals" when viewed through a microscope; they seem to be furnished with very sharp teeth, which may, like the rat's, grow sharper the more they are used. Last week I took pains to count the branches that had fallen from a large white oak in our village, when to my astonishment I found *five hundred and fifty-six*, to say nothing of those that may have been carried or blown off to a distance so that I could not count them, nor of the hundred or two which are eaten off, and still hanging to the tree by a portion of bark.—Some smaller trees that I have seen have suffered to a still greater extent in proportion to their size. Should any person be inclined to doubt the correctness of the above assertion, I would only say, if they will come here I will give them ocular demonstration of its truth. Some of our noblest oaks—for the oak suffers the most—already present quite a ragged and lean appearance, and should this insect continue to work for two or three years as he has this year, many trees would be nearly

or quite ruined. I hope we shall take the advice of Dr. Harris, and pick up and burn the branches and with them the insects.

JAMES F. C. HYDE.

Newton Centre, Aug. 9, 1852.

For the New England Farmer.

EFFECTS OF THE LATE SEVERE WINTER UPON VEGETATION.

The above is the head of an interesting editorial in the last *Farmer*, and as the views of its readers upon the subject are solicited, I will communicate mine, hoping that others will do likewise.

The question is asked, "Is it the intensity of the cold that has killed the trees and plants? and after clearly showing that the severity of the cold could not have been the cause, the inquiry is made, "to what then may be imputed such wide-spread injury to trees?"

The fact could not have escaped the notice of every observer, that the last autumn was favorable to the growth of trees until a late period, and that the cold weather commenced very suddenly; consequently the newly-made wood had not sufficiently ripened for so sudden a change of temperature; and hence in my opinion the injury.

An acquaintance of mine early anticipating bad effects from the late growing of trees, pinched off the tops and extremities of some of his choicest and tenderest varieties to check their growth and cause the wood to ripen and prepare for winter; his success was complete. I have also previously had recourse to the same method, with beneficial results. It is more than forty years since I have had something to do in tree culture, but have never known the damage to trees equal to the past winter, although once within that period it was severe in this section, destroying not only nursery trees, but in some instances, those of six and eight inches in diameter which had previously made a rapid growth and consequently did not ripen so early as those of less growth. Some indication of injury may be noticed by the close observer, very soon after the sap begins to circulate. First, a very faint yellowish shade may be discovered upon the inner surface of the bark (as I have noticed in examining the vitality of scions) which increases and seems to incline towards the root as the season advances. I am satisfied that early heading back, and covering the wounds with grafting cement, trees whose extremities show indications of injury, is beneficial to their health, believing that the diseased sap exerts an unhealthy influence upon the other parts of the tree. D. TABOR.

Vassalboro', Me., 8th mo., 1852.

REMARKS.—Some of the best cultivators of trees are in the habit of pinching off the late, tender growth of branches. Out of the various experiences of observing men, we cannot doubt but that by-and-by some valuable discovery will be made, whereby we shall be able to prevent these occasional great losses in our trees and shrubs.

SULPHATE OF LIME.—The attention of the reader is called to the article on the subject in another column. He will not find it too long when he finds how plainly and practically it is treated.

GOLDEN POLANDS.

The *Golden Pheasant*, *Golden Poland*, *Pheasant Malay* and *Spangled Hamburg* are terms indiscriminately applied by those not well versed in the different varieties of fowls. The term *pheasant*, as applied to fowls, we are inclined to think, is but a pleasant fancy. Nature is nature, and will not be kicked or coaxed out of her propensities. She will not mingle the pheasant and the hen, and continue it, any more than she will the fox and the rabbit, or the dog and the cat. There may be an unnatural connection, but its issue will be a mule, shorn of its virility and incapable of continuing its kind. Bird fanciers may tickle themselves with the fiction, but if the purchaser desires a pheasant he must not go to the hen-coop for it.

The *Golden Poland*s are sometimes called *Gold-spangled*, their plumage approaching to that of the *Gold-spangled Hamburg*s. The *Golden Poland*s, when well-bred, are exceedingly handsome; the cock having golden hackles and gold and brown feathers on the back; breast and wings richly spotted with ochre and dark brown; but little comb and wattles. The hen is richly laced with dark brown or black on an ochre ground; dark-spotted crest; legs light blue, and displaying a small web between the toes.

The *Spangled Hamburg*s are distinguished by their large top-knots being colored instead of white, and the black and conspicuous ruff or ruff on the throat and under the beak. There are

two kinds,—the golden and silver-spangled; the ground of the feathers of the golden-spangled being a rich yellow, approaching to an orange-red, with black spots or spangles.

The above sketch was taken from life from a pair owned by Mr. RAYNOLDS, one of the proprietors of the *Farmer*, who has a fine collection of fowls.

A. J. DOWNING.

The sudden death of this gentleman is one of those startling events which ought to admonish us of the uncertainty of life, and of the importance of being ready to receive the dread summons, come when and how it may. Our heart is full of sorrow and sympathy for those so suddenly and awfully bereaved of one so gentle and good; one whose clearness of intellect, benevolence and love of his kind has knit thousand of other hearts to his own and those of his near kindred.

Encircled in mourning lines is the announcement of his death in the August number of the *Horticulturalist*, and immediately following is THE LAST leading article for that work from his hands. An estimable friend who loves rural art and human kind as well as the lamented DOWNING, in a private letter before us says: "We have met with a sad loss in poor DOWNING, who was so suddenly cut off in the Henry Clay. It is a tearful event to all who loved rural life. The death of such men as Col. SKINNER and DOWNING admonish us to do with our might what our hands find to do." Such

is the common sentiment, whenever we hear his name uttered.

For the New England Farmer.

DOMESTIC MANURE HEAP.

MESSERS. EDITORS:—I am one of quite a numerous class, an owner of a house and half acre of land in the vicinity of Boston, where I am trying to raise fruit and vegetables for family consumption. Having anatural fondness for the business, and aided materially by a constant perusal of your valuable journal and some experience, I have been tolerably successful. My strawberries, this year, blossomed well, but produced but little fruit, owing, perhaps, to the dry weather. Raspberries were productive and good. Currants bore much less than last year. Apples and pears promise well. Squashes, particularly the marrow, I find it difficult to raise, grubs and other insects taking the life out of them, and the blossoms prove unproductive.

Like most of my neighbors, I have no stable, hog pen, or other manufactory for manure, and finding it necessary, to insure good crops, to have a supply of this article, I wish to inquire through you the best method of decomposing weeds and other vegetable matter, so as to make a good dressing for plants. To collect this matter in piles and wait for its decomposition is a slow process, and after all, the product is not what is wanted. Stable manure is expensive to buy, and what I need is a domestic manure heap, which can be constantly increased and made serviceable, without at the same time offending the olfactory organs of the family and neighborhood. In other words, a *cheap and proper* supply of manure is what is wanted, and if you can give your readers a recipe for such an article, you will confer a favor on many who do not wish their vegetables to "cost more than they come to."

L. T. S.

Brookline, Aug., 1852.

REMARKS.—We can tell our friend what course many people pursue under circumstances similar to his own, and find "material aid" in it. In some convenient spot, draw away the earth from the centre to the circumference, of a space eight or ten feet in diameter, so as to form a basin—much as the masons sometimes do in forming a mortar bed. Conduct the sink water to it, soap suds and all other waste water from the house. In this throw the rakings from the paths, the weeds, fine chip dirt and saw dust from the wood pile, leaves, and in the autumn the vines of tomatoes, cucumbers, potatoes, squashes, melons, and in short every thing that may be gathered (and considerable may be) in the management of half an acre of land. If a good deal of vegetable matter is collected and you desire a rapid decomposition, sprinkle quick lime in small quantities occasionally upon the heap as you are adding to it. Overhaul it and mingle thoroughly with the fork, adding a few pounds of gypsum during the operation. This mode of collecting and making manure requires constant care and a steady hand, but, as the merchants say, *it will pay*, and pay well. Those who

have not tried it will be surprised how much may be accumulated in a year. During the summer the "mine" may be surrounded by pole beans, which will yield a treble tribute—hide the deformity, form a pleasant group in the garden and supply the table with a wholesome and seasonable vegetable.

You may also find much benefit in the use of special manures. A little guano, applied in the right way, will prove of great service. It is compact, easily transported and applied, and for the garden is an economical dressing. Thoroughly mingled with moist soil, it may be advantageously applied to any plant of the garden with good results, generally. Mingled with moist loam it may be scattered upon borders and lawns, and will soon produce a visible effect, in giving them a fine dark green appearance. But leached and applied in a liquid form we think better.

Other concentrated fertilizers may be used; such as bone dust, gypsum, ashes, &c. Ashes will scarcely come amiss on any soil; its potash is needed everywhere.

With these helps, and a judicious management of the "domestic manure heap," with an eye to the Beautiful in the arrangement of walks, flower beds, groups of trees, flowering plants, roots, vines, &c., and a careful, neat cultivation of them all, what a charming adjunct may an half acre become to a well ordered home; what delightful associations shall spring up in the hearts of the children who pluck its flowers, while the parents walk in its cooling shades, happy in the affections of those whose tastes have been gently formed by the influences of the garden.

A HALF ACRE! a little world in itself; teeming with life and invitations to be virtuous and happy, with scope enough for the exercise of all your rural art and taste, and a convenient safety-valve for any superabundance of physical energy.

Good old Izaak Walton commended certain delectable meadows and fruitful fishing grounds to those who "loved virtue and angling"—and in imitation of his sage counsel we commend the garden to those who love a delightful occupation, fresh and instructive scenes, and happy influences about them.

For the New England Farmer.

WHITE BLUEBERRIES.

MR. BROWN:—In answer to your inquiry, if the white blueberries that I left at your office were cultivated, I state that they were not. I found them growing wild in a pasture in this town. They are also growing wild in Rochester, N. H. I cannot learn that any trial has been made to domesticate them, and I can see no reason why they can not be ameliorated and improved in size and productiveness. I intend to secure the plant for trial, and shall also sow seed, which I think is the proper method to improve the fruit.

I think the time will come when the wild, in-

digenous small berries will be cultivated successfully and profitably, and if we can get a fruit that is as good as the dark colored ones, and that is stainless, it will be a consideration with those who regard a handsome set of teeth.

Yours, J. S. NEEDHAM.
Danvers, Aug., 1852.

AGRICULTURAL GEOLOGY.

BY JOSIAH HOLBROOK.

NO. I.—ELEMENTARY INSTRUCTION.

No class in the community have an equal interest in geology with farmers. No science is so interesting to farmers as geology in connection with chemistry. The two sciences can not be separated and justice done to either. While the elements of our globe, especially of soils, require chemical tests to determine their character, these very elements are absolutely essential for experiments to determine the fundamental principles of chemistry. Oxygen, the most powerful chemical agent in creation, is also the most abundant material in rocks and soils. The one as an element, the other as an agent, are alike essential to each other, and both indispensable, as at the foundation of all agricultural science.

A knowledge of each is as feasible as it is important—entirely within the comprehension of a child six years old. Each is a science of facts more than of abstract reasoning—of facts, too, equally instructive and delightful to every young mind.

Take an example:—The child has placed before him two glass tumblers—the one containing quartz, the other lime, or sand and chalk. The name of each is of course as readily learned as the name of iron, lead, gold, tree, horse, or any other subject in nature or art. Into each tumbler is poured some sulphuric or muriatic acid. In the tumbler of lime the pupil observes an action—in that of quartz no action. He is told that this action is called effervescence. He hence learns to recognize lime and quartz, and the more certainly from the recollection that the one effervesces with acids and the other does not.

Here is an example of geology and chemistry, alike useful to the farmer and interesting to the farmer's child, or any child. The same simplicity and direct fundamental instruction run through the whole of both of these exceedingly practical sciences.

I may hereafter point out a few of the leading principles of these two sciences; their connection with each other; their essential importance to all classes, and, most of all, farmers; their exceeding fitness for the early instruction of children, and the entire feasibility of having them among the "first lessons" taught in each of the eighty thousand American schools.

NO. II.—SIMPLE ELEMENTS.

Oxus is the Greek word for *acid*; ginomai, in Greek, means *make*; hence the literal meaning of oxygen is *acid maker*. Combined with sulphur it forms sulphuric acid; with nitrogen, nitric acid; with carbon, carbonic acid, &c. Respiration, combustion and fermentation are the three principal operations producing the combinations of oxygen and carbon; the results, carbonic acid.

Acids combine readily with metals, earths and alkalis—as iron, lime and potash. By chemists

these combinations are called salts, designated by the termination *ate*. Sulphuric acid combining with various bases, produces sulphates; nitric, nitrates, carbonic, carbonates. Sulphate of lime is gypsum or plaster of Paris; sulphate of iron, copperas; of soda, glauber salts; of magnesia, epsom salts. Carbonates of iron, copper and lead, are ores of those metals.

About a century ago water was found to be composed of oxygen and hydrogen, and common air of oxygen and nitrogen. About half a century since oxygen was found by Sir Humphrey Davy to be an element of rocks, of course of soils, as it was of the alkalis, potash and soda. The other elements in the earths and alkalis, combined with oxygen, were found by the same great chemist to be metals very peculiar in character.

It hence appears that oxygen is an element in air, earth and water, existing abundantly in solid, liquid and aerial forms. In the whole it constitutes nearly half our globe. It is, of course, the most abundant element in the material world. It is also the most important agent in producing changes in matter essential to human existence. It is very appropriately called *vital air*, as neither animal life nor any life can exist without it. It is no less essential to combustion than life. It also acts with great energy upon metals and other solid substances. In this action it produces three very large and important classes of oxides—oxides, acids, and salts. Iron rust is the oxide of iron; the dross of lead, oxide of lead; burnt lime, the oxide of calcium; pure potash, the oxide of potassium; pure soda, the oxide of sodium; siliceous or flint, the oxide of silicium. The combination of one part oxygen and four of nitrogen, constitutes the atmosphere; three parts oxygen and one nitrogen form nitric acid—aquafortis. Combined with other substances, it forms numerous acids. Saltpeter is the nitre of potash. The large quantity of oxygen it receives from the nitric acid fits it for a material for gunpowder—giving to that powerful agent its principal powers.

A plate, tumbler and scrap of paper, with a little water, will enable any teacher or parent to perform an experiment on oxygen equally simple, instructive and interesting. In a deep plate pour some water. On the water place a scrap of thick paper, piece of cork, or other light substance; on that another piece of paper, or cotton moistened with oil. On lighting the paper or cotton, place over it a large empty tumbler. The combustion continues for a few seconds, and when it is extinguished the water occupies about one-fifth of the space in the tumbler, showing the necessity of oxygen for combustion, and that it constitutes about one-fifth the air we breathe. What man, woman or child would not like to be familiarly acquainted with an element so abundant—an agent so active as oxygen, especially when such an acquaintance is equally simple, useful and delightful?

[TO BE CONTINUED.]

MOSS ON TREES.—The American Farmer gives the following as an excellent application to the scraped trunk to prevent the growth of moss, and destroy eggs of insects. One gallon of soft soap, one pound flour of sulphur, and one quart of salt, to be well-stirred together, and put on with a hard brush. •

For the New England Farmer.

ARSENICAL SOAP—ELM TREES.

MR. EDITOR:—I have been a subscriber to the *Farmer* from its commencement, and I have received much valuable information from its pages. The last monthly number I think contains more interesting and useful articles than any which have preceded it.

I was much pleased with Mr. FRENCH's article on stuffing birds; the recipe, however, for making arsenical soap is not quite definite enough for practical application—viz., *one-third soap, two-thirds arsenic, melted with one ounce of camphor gum*. Will Mr. F. please correct, for one who wishes to prepare it.

DISEASE OF ELM TREES.

In our nursery we have lost quite a number of young elm trees from some cause unknown. The disease commenced at the ends or near the ends of the limbs, and extends downward to the trunk.—First the leaves curl up and turn black, the wood under the bark next turns to a dark brown color, which extends through the wood, and the whole branch dies. This process continues till the whole tree is dead.

No cure can be effected unless the whole diseased part is taken off, the cut being made in the green and healthy wood; and even then the disease strikes other parts of the same tree, often entirely destroying it. We have had trees affected of sizes from two to ten feet high. No insect or trace of any can be found on either the wood or leaves.

Can you or any of your subscribers throw any light on this subject? L. E. NOYES.

Abington, Aug. 11, 1852.

REMARKS.—If not already so, Mr. FRENCH will make all plain about the soap. Perhaps some of our readers have found a remedy for the diseased elm trees, and will communicate it for the benefit of friend Noyes and the "rest of mankind."

A PROLIFIC COW.

A correspondent informs us that BENJ. GEORGE, Esq., of Plastow, N. H., has a cow five years old this spring, which brought at one birth three calves, all of which are now living, about three months old, and doing well. Two are heifers and one a bull. He bought the cow when two years old from an eastern drover. She had a calf in May, 1849; another in 1850; a third in 1851; and the three on the third day of April, 1852. They weighed almost 110 lbs. when dropped. The cow is of middling size. Mr. George states that the first season she gave milk, twenty-seven pounds of butter were made of her milk in three weeks. The calves are now running at pasture with the cow, and are thriving, of good size, and of about the same weight, though of different color, and are for sale.

FINE BARLEY.—MR. SAMUEL DINGLEY, of Columbia, California, has just arrived from that place, and brought us a stool of barley, which is some-

what of a wonder in the vegetable world. It is the product of a *single seed*, and measures near the roots thirteen inches in circumference. From this one root there sprung one hundred and twelve vigorous straws or stems, one hundred and thirty one heads, and fourteen thousand one hundred and forty-eight kernels of barley! The stool grew near a spring where it found plenty of water, and threw up stalks about six feet high. Each head has six rows of kernels.

SUFFOLK PIGS.

This breed of swine is deservedly popular; the animals are quiet, cheaply and easily kept, and the pork commands a higher price in the market than any other. A day or two since we saw a lot from J. L. LOVERING, Esq., of Hartford, Vt., directly out of the Stickney importation, which were as handsome as any style of beauty usually conceded to pigs. We think we have never seen handsomer than many from this gentleman's stock.

To our friends in that part of Middlesex county, we would say that Mr. D. G. MERRIAM, of Chelmsford, has a pair from this stock, which for perfection of form and *manners* have scarcely been surpassed in this State.

Mr. RAYNOLDS, one of the proprietors of this paper, has just sent a pair to Georgia, from the same stock. These we have seen, and pronounce them the most perfect models in all pigdom.—They are to be exhibited at an annual fair in that State.

WHITE CLOVER.

We are satisfied that our farmers do not appreciate the white clover or white honeysuckle, as some call it, so highly as they ought, nor take so much pains as they should to cultivate it. In fact but very few sow it, when they lay down their lands to grass. They trust to nature to supply them with it.

When once seeded with it, the soil will retain it a long time, for the low short stems will bear heads full of seeds, and those become scattered out into the soil, and thus the seed is kept in the ground and spring up whenever circumstances are favorable for its development. A moderately clayey loam is congenial for it, and if this be dressed with an occasional dressing of plaster it will bring it out abundantly. It affords an excellent pasturage for bees, the best honey in the world being obtained by these little insects from white clover.

It also affords the best pasturage for cattle, especially cows from whose milk cheese is manufactured, as experiments have proved that cows that graze upon this species of clover yield milk that contains *casein*, or cheese particles, in greater abundance than they do when fed on the common grasses. We throw these hints out for our readers to think of. Four or five pounds, mingled with a due quantity of other grass seeds, will be sufficient for an acre, and it can be obtained at reasonable prices at the agricultural seed stores.—*Maine Farmer*.

Mechanics' Department, Arts, &c.

LOCOMOTIVE BUILDING.

John Souther, Esq., at the Globe Works, South Boston, has just completed a finely built locomotive called the "Indiana," for the Terre Haute and Richmond Railroad. It is about twenty tons weight, and is a first class machine. It is to be conveyed via railroad to Buffalo, and thence to Cleveland by water. We understand that the business of locomotive building was never better than at the present time. All the shops are crowded with work, and some manufacturers have orders which cannot be answered during the present year. In connection with the Globe Works, South Boston, Mr. Souther has in full operation at Richmond, Va., the Tredegar Works, where are manufactured locomotive and stationary engines for the Southern trade. He has for both shops orders for about eighty locomotives, of which twenty-five are for roads in the State of Ohio.

The Boston Locomotive Works, Harrison Avenue, are also taxing their energies to fulfil the orders the Company have on hand, and are now turning out two locomotives every week.

Seth Wilmarth, at the Union Works, South Boston, has contracts for twelve of his superior locomotives, all to be completed within three months. Several of these locomotives are intended for the Hudson River Railroad, and are to be capable of running a mile a minute.

The shops at Manchester, Lowell and Taunton, are crowded with work, while the locomotive builder, Rogers, of Patterson, N. J., has more than he can do, notwithstanding his great facilities for extensive operations.

The cause of this great demand is the opening of a large number of new railroads at the West and South, and locomotives will have a ready sale for years to come, as plans have been laid to cover the whole of the North Western States with a net work of iron rails. There is also a demand for eastern machinists at the West, and numbers are leaving every month for railroads and machine shops in that section of our country.—*Traveller*.

NEW CARPET LOOM.—We saw in operation on Monday, at Mr. Bickford's machine shop in this city, a new carpet loom, the invention of John Goulding, Esq., a gentleman of well-known mechanical ingenuity. It is much more compact, and occupies much less room, than any other carpet loom now in use; requiring a space 20 by 10 feet in a room 10 feet high. It weaves nearly twice as many colors as any other loom, of any pattern of Brussels carpeting that may be desired; and performs the work with much neatness and precision; and gives to the web a high finish. It is a beautiful machine, of great simplicity in its construction, and all the parts apparently so adjusted as to be durable in operation. It is much superior to any carpet loom now in use.—*Worcester Palladium*.

IRON.—The uses to which iron is put are becoming more various every day. We have not only iron railroads, iron locomotives, iron ships and steamboats, but iron bedsteads, iron furniture, and iron crockery. We have iron stores, iron cottages, iron fish hooks, iron viaducts, and iron light-houses. We have not only iron rolling pins, and

iron bereans, but iron ball rooms—the latter article being just ordered by the Queen of Manchester. We have iron stools, iron rocking chairs, and in a few years will have iron overcoats and iron counterpanes, *sheets* of iron being already very common. Whether we shall ever reach iron cocktails, or pork made of pig-iron, is yet to be seen. We should not be at all surprised, however, if we did.

A NEW MACHINE.—A machine for painting window blinds has been invented by Samuel Fields, a painter of Worcester. The blinds are first dipped into a tub or long box of paint; they are then affixed to circular pieces of board which run upon a shaft within a large cylinder made of zinc. The blinds are then turned within this cylinder for a few minutes, then taken out and brushed over. By this machine one man can paint easily 80 pairs of blinds in a day and not work over ten hours.

THE TUNNEL MACHINE.—We still receive accounts of the success of the great Hoosac Mountain Borer. The machine more than answers the expectation of the builders. It was warranted to bore six feet a day every day, and place the rock in a position to be taken away, or the builders were to receive no pay for the machine. The *Greenfield Gazette* says, that it is found that it will bore more than double that distance. In fact, it has, with the present imperfect state of its working, bored at the rate of twenty inches an hour. The rock operated on so far is the hardest kind of quartz rock.—*Boston Journal*.

Ladies' Department.

DOMESTIC RECIPES.

BUCKWHEAT CAKES.—One pint of buckwheat meal, one quart of water, salt just to taste, one gill of home-made yeast. Mix the water (which should be lukewarm if the weather is cold,) with the meal, add the salt and yeast, beat it well; when light, bake them on a griddle. Grease the griddle, pour on a little of the batter, spread it so as to form a cake about the size of a breakfast plate. The cakes should be very smooth at the edges. When they are done on one side, turn them; when brown on both sides, put some butter on the plate, place the cake on it, butter the top, bake another and put on it, butter it, and send them to the table. Buckwheat cakes are much better if they are sent to the table with only one or two on a plate.

SODA BISCUIT.—Six ounces of butter, six ounces of sugar, one tea-spoonful of the carbonate of soda, one pint of milk, flour enough to form a dough.—Melt the butter in the milk and dissolve the soda in it. Stir in the sugar, and add flour enough to form a stiff dough. Knead it well, roll it out thin, then knead it up again until it is smooth and light. Roll it out in sheets about a quarter of an inch thick, cut it into cakes, and bake them in a rather hot oven.

KISSES, OR CREAM CAKE.—The whites of three eggs, one drop of essence of lemon, as much powdered sugar as will thicken the eggs. Whisk the whites to a dry froth, then add the powdered sugar, a tea-spoonful at a time, till the egg is as

thick as very thick batter. Wet a sheet of white paper, place it on a tin, and drop the egg and sugar on it in lumps about the shape and size of a walnut. Set them in a cool oven, and as soon as the sugar is hardened take them out; with a broad-bladed knife, take them off the paper, place the flat parts of two together, put them on a sieve in a very cool oven to dry.—*National Cook Book.*

SYRUP FOR PRESERVES.—A correspondent of the *Germantown Telegraph* furnishes the following:—Take eight pounds of bright, clear New Orleans or sugar-house molasses, eight pounds pure water, and one pound coarsely broken charcoal. Boil together for twenty minutes, and then strain through a flannel cloth folded double. Return the liquor to the kettle, with the white of one fresh egg, and boil moderately till the syrup forms a candy of the desired consistency, and strain again. This syrup is a superior article for preserving pears, plums, &c., for tarts, and is preferred by most to that made of the best of sugar, being less liable to candy and ferment.

A WIFE'S PRAYER.

We do not assume that we recognize that which is truly beautiful in all that makes humanity approach to the Divine; but if there is anything that comes nearer to the imploration of Ruth to Naomi than the subjoined, we have not seen it:—

"Lord! bless and preserve that dear person who thou hast chosen to be my husband: let his life be long and blessed, comfortable and holy; and let me also become a great blessing and comfort unto him, a sharer in all his joys, a refreshment in all his sorrows, a meet helper for him in all the accidents and changes in the world; make me amiable forever in his eyes, and forever dear to him. Unite his heart to me in the dearest love and holiness, and mine to him in all sweetness, charity and compliance. Keep me from all ungentleness, all discontentedness, and unreasonableness, of passion and humor; and make me humble and obedient, useful and observant, that we may delight in each other according to Thy blessed word, and both of us may rejoice in Thee, having our portion in the love and service of God forever."

Boy Department.

CHARACTER FOR THE YOUNG.

Character is everything to the young, as it is the surest means of success in life. It is better than the most ample fortune; it is better than the patronage of rich and powerful friends. A young person of established character, virtuous principles, of good conduct, though he be poor, and left to his own unaided efforts, will rarely fail to make a way for himself in the world. He may be assailed by misfortune; he may lose his health or fall into adverse circumstances, and so be embarrassed and oppressed in his course; but as a general rule, it cannot be questioned that a fair character, a character for intelligence, virtue, and worth, is the surest pledge of success in life. For many years I have been accustomed to watch with great interest, the fortunes of the young in their progress in life; and long since have I come to the settled conclusion, that in so far as success is concerned, whether in the learned professions, or in

the ordinary business of men, character, virtue, intelligence, a well regulated mind and heart, is of higher value than heirship to the richest estate; than all outward advantages whatever. Such an estate, such advantages, are apt to inflate with pride, to lead to imprudence, to idleness and vice; and where this is the case, it takes but a short time to squander a fortune and bar every door to respectability and happiness. But character, I repeat, never fails. It makes friends and subdues enemies, creates funds, opens the gates of opportunity, draws around its possessor patronage and support, makes him a sure and easy way to wealth, to honor, and to happiness.

Lost! Lost!—Many hours of precious time, by young men and boys, who loiter in front of the Custom House every evening. No reward is offered for their recovery, because they have flown into the irrecoverable past, and because the losers are insensible to their value. In the future, which is coming upon the loiterers, they will become alive to the importance of their loss, when too late. The morning hours of life then will have flown, leaving no record of their profitable use behind, but only a dull aching void. We trust they will make nuisances of themselves no longer, but set themselves to improve the time that is yet spared to them, in useful studies, or at least in healthful recreation. A loafer is a burden to himself, and an eyesore to all beholders.—*Portland Transcript.*

Wanted,



A full-blood AYRSHIRE Heifer Calf, or yearling, for which a fair price will be paid.

Apply at this office.
July 31.

11*

Mexican Guano.

A NEW ARTICLE is now offered to the Agriculturist and Dealers, under the above name, from its having been found near the Mexican coast. It has been analyzed by C. T. Jackson, M. D., State Assayer, Boston, Dr. David Stewart, of Baltimore, and others. Dr. Stewart says it contains the largest proportion of Phosphates he has ever met with in Guano.

The following are the result of the analysis made by C. T. Jackson, M. D.:

Water.....	23.40
Vegetable Matter.....	15.80
Soluble Salts (in Water) Phos. Soda.....	0.12
Phosphates of Lime and Magnesia.....	60.50
Insoluble Matter (Scales).....	0.10

99.92

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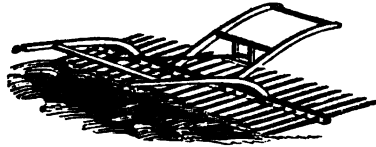
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Boston, March 30, 1852

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Dec. 27, 1851.

int

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Dec. 27, 1851.

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July 24, 1852. 3w

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The Committee appointed by the MIDDLE-
SEX COUNTY AGRICULTURAL SOCIETY
hereby give notice that they will attend to the
examination of such Farms, Apple and Pear Or-
chards, Swamp and Bog Meadows, &c., as may
be entered for premiums, from and after the first day of Sep-
tember next.

Application should be made immediately, to SIMON
BROWN, Secretary of the Society, at Concord, or to either
of the Committee. Full statements of the management of the
Farm and Crops, should accompany the application.

CHARLES BABBSIDGE, Pepperell,
SAMUEL CHANDLER, Lexington,
SIMON BROWN, Concord,
Committee on Farms.

Aug. 7, 1852.

3w

Wanted,



A BULL CALF, of deep red color, half
Durham and half Devonshire breed;—
would prefer that his sire should be De-
vonshire.

Apply at this office.
July 24, 1852. 17y

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Is published on the first of every month, by JOHN RAYNOLDS
and JOS. NOURSE, at Quincy Hall, South Market St., Boston.

SIMON BROWN, Editor.

FREDERICK HOLBROOK, } Associate
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To prevent any misunderstanding, we quote the 16th sec-
tion of the law of 3d March, 1845, which is as follows:

SEC. 16. And be it further enacted, that the term "Newspaper," herein before used, shall be, and the same is hereby de-
fined to be, any printed publication, issued in numbers con-
sisting of not more than two sheets, and published at short
stated intervals of not more than one month, conveying in-
formation of passing events, and bona fide extras and suppli-
ments of such publication.

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OFFICE....QUINCY HALL.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

THE FARM IN OCTOBER.

This is the tenth month of the year. Tarstegan says our Saxon ancestors called it *Wyn-monat*; *wyn* signifies wine; "and albeit they had not anciently wines in Germany, yet in this season had they them from divers countries adjoining." Dr. F. Sayer says they also called it *Winter-fulleth*.

OCTOBER, in our climate is a delightful month. The early frost in September brought the first and symptoms of decay for the year, and prepared our feelings for the general dissolution of the vegetable kingdom which must follow in October. The first shock to our senses being over, we now find the chief beauty of the month arises from vegetable death itself. It is seen every where in the drooping vines, the ripening corn and changing leaves with all their lights and shades of green, amber, red, light red, light and dark green, white, brown, russet, and yellow of all sorts. Heavy dews prevail; the mornings and evenings increase in mistiness, while the middle of the day is the perfection of climate

"The orient is lighted with crimson glow,
The night and its dreams are fled,
And the glorious roll of nature now
Is in all its brightness spread.

The autumn has tinged the trees with gold,
And crimsoned the shrubs of the hills;
And the full seed sleeps in earth's bosom cold;
And hope all the universe fills."

We delight to linger with the poetry of the farm—for poetry it has at all seasons—to ramble in the forest,

"Where the sound of dropping nuts is heard, though all the woods be still."

drop a hook in the dark holes of the winding trout brook, and while waiting for a nibble, call up the memories of old Isaac Walton, and Herbert, or father back, of Cincinnatus, Cato and Columella, or sketch upon the sand the quaint cuts in *Markham's Farewell to Husbandry*, which he has given as samples of pruning and shaping the heads of apple trees. Ah! these are true enjoyments which every farmer may share—and as we have now alluded to them sufficiently to set his "expect-

tation on tip-toe," we will mention some of the other business of the Farm—and first

OF ITS NEATNESS.—We often form our opinions of the farm and the farmer from the first view we have of the premises, the *coup d'œil*, as the French say, when we take in at a glance all its general appearance, and that impression, whether it be favorable or unfavorable, is strongly retained on the mind. And this appearance is a pretty good indication of what the farmer in reality is—whether farmer Tink or farmer Stack, and his profits will usually be in accordance with the habits which he has chosen from one of the two characters. Neatness in the house, barn, door-yard, and under the fences and walls, indicate economy and thrift; bright implements and order in arrangement indicate cheerfulness and contentment, while well-fed horses, cattle and swine, with sleek hides and fat ribs, indicate a feeling heart, as well as the other virtues mentioned. When these are combined, united with the habits of a good parishoner, the farm becomes the blest abode of man. He need not sigh for the Eden of the Euphrates, or power and popularity as bestowed by the world; his Paradise is begun, fashioned by his own hands, watered by the rain, and visited by the sunshine of heaven, and whose memory thereof shall never be blotted from his mind.

October is the month, of all seasons, for the farmer to establish throughout his borders this neatness and order, the stamp of genuine farming. He will level the humps and hillocks of his fields, and scatter them with manure and grass seed; level double, and fill up, dead furrows; dig out bushes from the wall, and cart away the rich earth which has been turned against it for many successive years, and prepare it for a crop of potatoes next spring, so that a year's cultivation may exterminate the roots. He will gather the rank weeds (if he has been so unwise as to let them stand till this time) and small brush and deposit them with muck and quick lime for future use.—

Loose stones will be collected and form the sluiceway for under-ground ditches, and larger ones laid into substantial wall. That fast rock "in the clover lot" upon which three plows have been broken, shall be blasted and deposited where it can no more mar the beauties of that fine field. The front-yard fence, and all the gates, may be repaired while the fingers are nimble, and he can make a tenon and mortice without "blowing his fingers."

COMPOST HEAPS.—See to these—you all know how.

POTATOES.—Dig as soon as they are ripe, lay them in moderate parcels and exclude the light.

SEEDS.—Save the best and earliest of every kind, and, more, satisfy yourselves by observation and inquiry what the effect of so doing will be upon your future crops.

CORN FODDER.—Carefully secure it all, this year particularly. Do not waste the large stalks, but cut and mix them with meal; they are nutritious, and in that form will do good service.

CORN.—Keep it cool in the barn floor before husking; it had better stand in the field than heat in the barn. Spread the ears thin or pile them in well-aired bins.

CORN FIELDS.—Towards the last of the month split the "Indian hills"—it is neater husbandry and we think better economy to gather the roots and stems and add them to the heap of weeds, brush and quick lime. It gives clear and pleasant plowing in the spring.

YOUNG TREES.—Take away all stubble, grass or weeds from their stems, so that mice may not find materials for their nests; then bank the trees with clear earth, and they are ready for winter. Where trees stand in mowing ground it will be well to clear away the grass roots and throw fine manure or loam close to their trunks. This will keep the mice away, and be a good fertilizer when spread early in the spring.

PRUNING.—Look after and shape the heads of young trees, and wherever a wound is left half an inch in diameter, cover it with wax cloth, paint or gum. See other articles on this subject in former numbers.

ROOTS.—Gather roots before heavy frosts occur, and store them carefully away. Roots should be perfectly matured before gathering, but collected *as soon as* that takes place, as they then rapidly lose their nutrient properties, a new elaboration of juices taking place, and much of the saccharine principle, which is the fattening one, is destroyed.

APPLES.—Winter apples should be carefully picked by hand. Keep them in a cold, moist cellar, the colder the better if they do not freeze.

Plow where you can, and do a thousand other things for which the favorable time is *October*.—Do it all cheerfully, and "with a will," as the sailor says, and Heaven will prosper your endeavors.

For the New England Farmer.

POTATO ROT.

Rumors are in the wind, that the *rot* is again coming; and that it has already appeared, to some extent, in many places. If this be so, it is important to be known, and to have all the facts connected with its appearance minutely registered. I have not myself seen any potatoes, distinctly marked by the rot; nevertheless, I have seen some fields, with appearances very suspicious. I recollect seeing a large field, on the Marblehead shore a few days since, where the vines, very luxuriant, looked as though they had been bitten by a frost;—they were fallen and dark colored—and many persons were employed in digging the potatoes, and crowding them off to the market, where they commanded nearly two dollars a bushel. Possibly the early ripening may have caused the discoloration of the vines, but such effects have not been produced on other fields that have come within my observation.

I know that those who have potatoes to sell will not be swift to make proclamation of their being diseased; and this makes me the more anxious to ascertain all cases of *real disease*, whenever it may be found to exist. I hope, Mr. Editor, you will not hesitate to record all facts that come to your knowledge. In this way, alone, may a remedy ever be applied. P.

August 27th, 1852.

REMARKS.—The above communication has been inadvertently omitted until this time.

For the New England Farmer.

ADDITIONS TO THE STOCK OF DOMESTIC ANIMALS AND USEFUL PLANTS.

MR. EDITOR:—Within the past year we have witnessed in our community a new ardor and a new movement in the promotion of agricultural improvement. In the meetings of the yeomanry at the State House, there has been a manifest demonstration that a great number of the farmers of the State are ready, not only to give up the superannuated implements, and to work with the new and improved tools, but that they seriously contemplate taking up new fields; and, discarding old errors, to enter upon an improved course of husbandry. They are willing to hear some things that they did not learn in their apprenticeship, provided there is a rational promise of benefit apparent upon the face of them. A Board of Agriculture has been created, to furnish greater facilities to the farmer by the collection of statistics, and to give aid and encouragement to agriculture in other modes. These things appear to mark a new era in the agriculture of the Commonwealth; to be the commencement of a new progress; and I regard it as a favorable time for making the suggestion herein contained, to the farmers of the State.

The question to which I wish now to draw the attention of the *New England Farmer* is, would it be profitable and expedient to add to the number of the domesticated animals, for the purpose of labor or for food, or for use in the arts, by importing or domesticating some not hitherto in use, or to import or cultivate trees or plants hitherto unused by us? Though God gave man dominion over all

the animals he had created, yet of the numerous kinds that inhabit the earth and air, only a score or two are domesticated in our country, and in most parts of Europe. Out of all the others remaining, either wild in our own country, or in a wild or tame condition in other countries, are there not some that might be profitably brought into use by importation or domestication, which either by their labor or their product would be valuable to the farmer and the State?

In our own country we have the buffalo, which might be very serviceable for labor, and for food, and for the product of leather. It might be worth a somewhat expensive experiment to ascertain whether in either one particular it would be superior to the ox. If the product of leather, milk, butter or cheese or beef should be superior to that of the native breed of neat cattle, it would be a valuable acquisition. Then there is the wild ox of Tartary, and the buffalo of Asia, and as beasts of burden or draught merely, the Zebra of Africa, and the animal called driggetai, or by the French hemione, a native of India, and the camel and dromedary. For their product, the common fallow deer of this country, the reindeer, and lama and alpaca, the chamois—and others that might perhaps prove valuable additions to the present stock of domestic animals. Among birds, the prairie hen and the wild goose, brant, loon, swan and pelican, all natives of our country, and very abundant in the West, about the Mississippi River; the guinea goose, of great size, and the toulouse, the largest of the tribe, the Aylesbury duck, and others of this family, the stork, the guan of Yucatan, the Mexican pheasant, the water hen, and so forth. There may be also some valuable additions to our stock of cultivated fruits and vegetables. The teak for instance for timber, and perhaps other trees for their wood; the Euphorbia of the Canaries, the sap of which furnishes a refreshing drink, the psoralia of our country, the root of which is edible, the sago palm, and some fruits or vegetables for eating, and some plants useful for various purposes in the arts, might perhaps be brought in to use, if the means were provided. There is a wild hemp, native to this country, the properties of which have not been tested, except by the Indians, and the character of which as respects cultivation is unknown. But especially some kinds of grasses, either native to this country, or of those cultivated in Europe, might be found, on trial, to be valuable acquisitions to the farmer for hay or pasture. In the last department particularly, of pasture, we think there is a great deficiency in not having the varieties of early and late flowering grasses, so as to have a longer continuance of pasture.

If a portion of the funds of all the Agricultural societies in the State could be united for this purpose, or if some other means could be provided for it, the trial might result in solid advantage. It would be a very appropriate enterprise for the National Agricultural Society recently formed, or for a society of Natural History, if any such have pecuniary ability for it.

A memoir on this subject, so far as relates to animals, was addressed by M. Isidore Geoffroy Saint Hilaire, member of the National Institute of France, to the Minister of Commerce and Agriculture, in 1844. Among others, he named the woolly kangaroo of New Holland as valuable for its

wool, and as food extremely agreeable and wholesome; and the tapir of Guyana, valuable for his services, and as food, and easily kept. He recommends a menagerie of naturalization; and this has since been commenced in France.

Some of the animals mentioned are wholly unknown as respects their disposition to domestication, and their value if domesticated. Many other animals and plants are well known in other countries. M. St. Hilaire says there are but forty kinds of animals domesticated in France. We are unable to recount the half of that number among us. But if the number here be as great as in France, there is good reason to suppose that some other kinds may be found, on trial, to be of advantage. If, however, the recommendation I have ventured to make in this paragraph, in relation to animals, should be considered valueless, I believe every one who has any conception of the extent of the vegetable department of nature will agree that in this, at least, it may be worth a trial. I have only named a few individuals in each department, for illustration, avoiding an extension of the list, which would make the communication too prolix.

Essex, Sept., 1852.

W. J. A. B.

DEATH OF PROFESSOR NORTON.

John Pitkin Norton died at the residence of his father, John T. Norton, Esq., in Farmington, Ct., on Sunday, the 5th inst., aged 50 years. His health failed him early in the spring, but a southern voyage, and two months residence in Florida, gave his friends hopes of its restoration. On his journey homeward in May, he was taken with the measles, and from that time his health was fluctuating, sometimes improved, and then again much worse, until within a few weeks past, when his decline became rapid and hopeless, and soon hurried him to the grave.

Prof. Norton, as an author and lecturer, is well known to the readers of agricultural periodicals. He held for some years, and at the time of his death, the Professorship of "Chemistry Applied to Agriculture" in Yale College, and has lectured frequently and with great acceptability, in this State, on subjects allied therewith. His treatise on "Scientific Agriculture," prepared as a prize essay for our State Society, is widely popular, and in extensive use as a text-book for schools; and his notes to Stephens' "Book of the Farm," together with numerous valuable contributions to the *Albany Cultivator*, and other Agricultural and Scientific journals, have placed his name at the head of the class of writers to which he belonged. His death, thus young, is a loss to the country, and one which every friend of improvement and intelligent cultivator of the soil will deplore. "He had already," says Prof. Silliman, in a just tribute to his worth, "made a strong impression on the public mind: he had gained the confidence of all, and promised a long career of usefulness."

His character as a man and a Christian, was most estimable and winning, he was eminently happy in his social and domestic relations, and everything seemed to promise a pleasant and useful life. But in the midst of his labors and his success, and his promise for the future—in the prime of manhood—One "who doeth all things well," has called him away from the scenes and toils of mortal life to the rewards of immortality.—*Rural New-Yorker*.

For the New England Farmer.

HOW TO DOCTOR SICK PASTURES.

BY HENRY F. FRENCH.

Before prescribing for a patient, we must understand his disease. There are several reasons why old pastures do not produce feed. A prominent reason is, that the valuable grasses, such as timothy, red-top and clover, from various causes, soon *run out*, and require to be renewed. Timothy, which we, at the North, call herds-grass, and which is perhaps, our most valuable grass, although strictly a perennial, is usually shortlived. It has a bulbous root, which is often *pulled up* by cattle in feeding, is peculiarly liable to be *thrown out by frost*, and to be *destroyed by drought*. The red clover is a biennial, and *ought* to die the second year, though if not permitted to seed it lives longer. *Red-top*, which is more hardy than either, is a perennial, but like all other grasses, flourishes better when occasionally renewed from seed. In a closely fed pasture little of any kind of grass can mature its seed, so that when the roots are once destroyed by any of the "ills that grass is heir to," Nature has no means left to supply the *vacuum* which philosophers say she so abhors, and the ground is ready, like other *idle* bodies, for any mischievous employment, such as raising thorns and thistles.

Then again there is a principle of *rotation* manifest as well in all nature's works, as in political operations. If a pine forest is cut off, a *hard* wood growth usually succeeds; if a *hard* wood lot is cleared, *pine* usually springs up in its place. This is chiefly owing to the fact, that the elements of fertility which promote the growth of the pine are in some measure different from those which promote the growth of the oak or maple, and while the one set have been for ages exhausted to some extent, the other have been at the same time accumulating. So with the grasses. They grow for a time luxuriantly, exhausting the peculiar elements which constitute their substance, and other plants, creeping vines, mosses and the like, take their place, and no valuable food is produced.

It may be suggested, that in pastures where cattle run through the season night and day, this exhausting process would not take place, because all that is taken from the land is returned to it. This would be a fair answer, were it true that the manure is returned to the same place where the grass grows, and evenly spread, and incorporated with the soil.

In that way the pasture would be always productive; but, in truth, the manure is left chiefly in particular localities—about watering places, under shade trees, or sheltered places; and if left *where* it is needed, it is in a condition to be mostly wasted by evaporation. No farmer would expect much advantage from a top dressing, applied as the cattle apply it to pastures.

Again, *cow-pastures*, from which the cows are taken at night, and to which they are returned in the morning, without being fed, are systematically robbed of so much of the elements of fertility as constitute the manure left in the yard, and the milk. Milk contains, among other elements, a large quantity of phosphoric acid and lime—elements which enter largely into the structure of all the valuable grasses, and constitute a large proportion of the *bones* of all animals. Old cow-pastures become in

time so exhausted of these elements that cows fed upon such pastures suffer for *materials from which to make milk*, and supply the means of growth for their bones and those of their calves, whether born or unborn. As they cannot get their supply in homoeopathic doses in the grass, they frequently are seen *chewing old bones*. The farmer calls this the *bone disease*, and so it is; and the remedy is very simple. It is to give the animal a small quantity of bone dust, daily, which she will eat greedily. It is kept at Ruggles, Nourse, Mason & Co.'s, in Boston, prepared for the purpose.

The *growth of bushes*, of various kinds, which shade the land, and exhaust its moisture, and nourishment, by means of their roots, is another manifest obstacle to the growth of sweet and nourishing feed.

Having thus ascertained the nature of the disease, with which our old pasture is afflicted, the *theory* of the remedy will be very apparent, although the *practicability* of it must depend somewhat on the *constitution* of the patient.

Fortunately, however, for this kind of practice, *old age* even is not incurable, although being a *chronic* disease, it requires thorough treatment. Medea is said to have renewed the youth of old Aeson, by drawing all the blood from his veins, and filling them with the juice of certain herbs. The blood has already been drawn out of our patient, and we have only to supply the *juices of the proper herbs*!

If your old pasture can be plowed, plow it in the fall, and seed it down any time before the ground freezes, with herds-grass and red-top. Clover should not be sowed in autumn, as it will not endure the winter, but may be sowed in spring, on the late snow. I use twelve quarts of herds-grass, one bushel of red-top, and six pounds of clover to the acre. A sprinkling of winter rye would add much to the next year's feed. Manure of some kind should be harrowed in before sowing, and the *kind* must depend upon locality and convenience.

Every forty gallons of milk contains one pound of *bone earth*, which is chiefly phosphate of lime. A cow which gives two gallons per day for six months, would carry away from the pasture in that form alone, nine pounds of bone earth, as much as is contained usually in twelve pounds of bone dust. Milk contains besides phosphoric acid and lime, appreciable quantities of potash, soda, magnesia, oxide of iron, sulphuric acid and chlorine.

All these elements are usually found in stable and barn manure, but they are there combined with large quantities of vegetable matter, which the sick cow-pasture does not need, so much as the tillage land, besides a vast weight of *water*, which the "sweet heavens" will send down before another summer, and save us the hauling. Let us understand this matter, and see whether it is worth while to haul out barn manure for this purpose. One hundred pounds of cow-dung contains about eighty-three pounds of *water*, worth no more than so much rain water, and fourteen pounds of hay, worth no more than well chopped hay, which has not been devoured. And of the remaining three pounds, a large part is of very little value. Something less than three ounces of phosphate of lime, (or bone earth) and not quite one and a half ounces of sulphate of lime, (or plaster of paris,)

about *half* that quantity of sulphate of potash, and much smaller quantities of the other elements for which we are searching, are found in the one hundred pounds! I have adopted Mr. Dana's analysis, which corresponds substantially with others.

One ton of barn manure would contain the elements of about *four and a half* pounds of bone dust and *two* pounds of plaster, and one pound of sulphate of potash. It would require, then, more than *twenty tons* of barn manure, to supply one hundred pounds of bone dust; and fifty tons to supply one hundred pounds of plaster! I desire to pursue this branch of our subject, only far enough to show that if we want to supply the peculiar elements in question, hauling out barn manure is not the cheapest way to do it. As old Weller told Sammy about getting married, "it is going through a good deal, my boy, to gain a little!"

An application of two hundred pounds of bone dust, the same quantity of ground plaster, and two bushels of *salt*, with twenty bushels of ashes to the acre, would constitute a cheap specific manure for our purpose. Bone dust should be harrowed in thoroughly. The other substances may be applied to the surface, or which is perhaps preferable, bushed in, with the seed, so as to spread them evenly. They are not of a nature to lose much by evaporation.

Leached ashes, at the rate of one hundred bushels to the acre, would alone be found a good manure for common pasture. Two hundred pounds of plaster, and as much salt, would be profitably applied at the same time.

Land which *cannot be plowed* by reason of stones, is difficult to manage. The application of ashes, and plaster and salt may be made with advantage. Often a good growth of bushes may supply the former. Bone dust should not be left upon the surface, as it evolves a large quantity of ammonia, which is of great value, and would be lost by evaporation. This loss might be prevented by mixing each hundred pounds with a cart-load of soil, or swamp mud, and allowing the compost to stand a few days before using. The addition of a hundred pounds of plaster, either by mixing with the heap before use, or sowing on the surface after it, would tend to prevent the escape of the ammonia.

I advise the application of these specific manures, because they are *cheaper* than barn-manure, and more easily carried and applied. Barn-manure contains other valuable constituents, besides those specified, but so far as old pastures are *particularly* to be treated, its value is in those elements which may be supplied in the manner suggested. I have not been very nice in my calculation of quantities, because none of the articles as usually sold are pure, but they are found more or less mingled with other valuable or nameless ingredients, which help their weight. I trust I have said enough to awaken reflection on the subject, for I know of no department of farming which has been so much neglected as our pastures.

But will such operations pay? are they not too expensive? Let us cipher this matter out. The pasturing of a cow for six months costs on an average six dollars, near any of our villages; and it requires six acres of an old pasture for her supply of feed. Cow pastures in such locations may be valued at twenty-five dollars per acre by the owner, and usually would sell for that sum. Evidently, *that sort of investment* does not pay.

Now, *one acre* of the same pasture, if not very dry, will keep a cow well for the season. The application of twenty-five dollars worth of labor and manure to an acre of almost any moist land that can be easily plowed, will make it produce as much feed as will equal two tons of good hay, and this will keep a cow six months.

Would not the farmer who has not sufficient pasture, act wisely to expend, if necessary, twenty-five dollars upon every acre of his present pasture, rather than to purchase as much more of the same kind at twenty-five dollars an acre?

The smaller your pasture the better, if there is feed enough. One acre is more easily fenced and watched than six, and cows thrive much better when not obliged to travel all day, exposed to the sun, in search of food. Finally, we all know in this region, that the larger our pastures, the worse for the animals, for in midsummer a cow cannot get enough on a hundred acres, to keep up her flow of milk without feeding at the barn, and the shorter her *beat*, the less the wear of her flesh in ranging about under the delusion that pastures furnish sufficient food.

H. F. F.

THE POTATO ROT.

We occasionally hear of the appearance of this disease in the potato field, but its ravages have been slight, in comparison with former years. In Ireland, notwithstanding the hue and cry that has been made about the rot, the potato crop will be fine, and it is doubtful whether the disease has even made its appearance, to any extent. The rot is said to prevail in some parts of New Jersey, Pennsylvania and Maryland, but we do not know what reliance may be placed on the reports that are circulated. The Newburyport *Herald* states that a fine potato field, at Byfield, belonging to Daniel Colman, Esq., of about an acre and a half, in which the potato had grown to a large size and of excellent quality, has within a few days been struck with the rot, so that there is not a sound potato in the field, and the whole crop is worthless. Those which were dug and brought into the house some days before in a sound state, were struck at the same time with the disease, and with equal virulence. The Exeter, N. H., *News-Letter* mentions that a solitary instance of a similar kind has occurred in that vicinity, but thinks the danger of the rot, for the present season, may be regarded as past.

The following communication from Hon. J. W. Proctor, of Danvers, appears in the Salem *Gazette* of Wednesday last:—

"EDITOR OF THE GAZETTE:—Sir,—I see it mentioned that Mr. Daniel Colman, of Newbury, has lost more than an acre of promising potatoes by the rot, since the month of September came in.—This is the only well authenticated statement of the appearance of the rot within our county, that has come to my knowledge the present season. If there be others, I should like to be informed of them, either by communications to me directly, or through the press, as I am desirous of tracing the progress of this malady, as far as practicable,

within the county. I have seen many fields of potatoes, but no appearance of what is generally understood as *the rot*. Mr. Colman is an intelligent farmer, and therefore I have reason to believe such a report would not be circulated from his place, unless it were well founded; though I cannot understand why the malady should have thus suddenly struck upon his fields, to the neglect of all others. If he will favor the public with an exact statement of the facts, as to the loss of his potatoes, he will confer a favor on many anxious inquirers.

Yours truly, J. W. PROCTOR."

For the New England Farmer.

A FINE FARM.

GENTLEMEN:—Passing through the rural part of Roxbury the other day, in the midst of that highly cultivated region, I spent an hour in looking at the farm where the city poor are located. It is managed by Mr. J. H. MESERVE, and shows what practical and scientific skill combined may accomplish. The farm consists of 200 acres, and the labor upon it is performed by the poor of the city, with the exception of two persons, who are teamsters. In passing over it I found everything in a condition indicating system, neatness and order, in the highest degree. He has a piece of corn of seven acres, upon which I should judge there would be at least ninety bushels to the acre, and all the other crops equally promising. B.

REMARKS.—In a lively fit of gratitude, Sancho Panza called down "blessings on the man who invented sleep;" and in a fit of that kind we call for blessings on the men who are instrumental in taking our unfortunate brethren from the auction block, and placing them in such comfortable homes and amid such delightful scenery as the suburbs of the city of Roxbury affords. There are some towns in New England still, where the poor are annually sold at auction, or at least their support is. Mr. MESERVE is in a responsible station, and we have no doubt fills it well. At any rate, if the farm appears as it is described by our correspondent, it is pretty certain that its manager has a good heart, and will make those under his care as happy as circumstances will admit.

PLASTER ON WHEAT IN THE FALL.

As many farmers in this vicinity are putting plaster on their wheat in the fall instead of the spring, as heretofore, I have taken pains to inquire the reason of the change; and believing the information obtained important to wheat growers generally, I take this method of giving it to the million, if you think proper to place it in your widely circulated journal.

Wheat, when plastered in the fall, obtains more root, and is thus enabled to stand the frosts better; it has the assistance of the plaster at a season of the year when it is almost impossible to go over the fields, and when it is most needed—namely, the very early spring; it gets its growth and ripens in good time; whereas, when applied in the spring, the wheat continues to grow late, sometimes to the injury of the crop—a superabundance of straw,

falling down, rust, &c. &c., oftentimes being the consequence.—*Genesee Farmer.*

For the New England Farmer.

CAN THE BEARING YEAR OF APPLE TREES BE CHANGED?

MR. EDITOR:—I have no hesitation in saying the bearing year can be changed, though to what extent I am not fully prepared to say. It is well known that the even years are our bearing years; this, I think, is because the Baldwin bears even years with few exceptions, and there is probably as many Baldwin apple trees in New England, as all other kinds put together. A very intelligent gentleman from Germany asked me a short time since why the even year was called the bearing year, and I gave him the same explanation that I have given above; he said there was no such thing in Germany. Trees and plants, as well as animals, need rest, they must and will have it; it is true, you may by artificial means over-work them, but the subject suffers to a greater or less extent for its extra exertions. Take, for instance, a Baldwin apple tree that has borne its fifteen barrels of apples—and I have now in my mind one that bore that number in 1850—and could we expect it to bear the next year! Certainly not; it had spent all its energies in perfecting this great crop, and it stood in absolute need of time to regain its lost powers; now, 1852, after having rested one year, it is again very full of apples, and probably will produce as many or more than it ever has before; and so it will go on as long as it lives, bearing and resting alternate years. This is also the case with some trees of the Hubbardston Nonsuch that I have noticed bearing very full, odd years, and resting even ones, while other trees of the same variety that bear small crops, bear every year; take the Roxbury Russet, that bears almost every year, but bears small crops; the same may be said of other kinds. Now what I mean to prove by the above is, that—and it is well known to all fruit growers—if a tree bears very large crops one year, it will not bear the next, but if it bears small crops it may bear every year. As I have before said, the Baldwin bears large crops every other year and those the even years with few exceptions; and now we may again ask the question, can we change the bearing year of a part so as to equalize the crop; and again I answer, I think we can, and will give my reasons why I think so. In front of our house stand two apple trees, Siberian Crabs, one of which bore the even year, the other the odd; this they have done ever since they commenced bearing until last year, when one of the trees was blasted, both leaf and blossom; new leaves came out, but it bore no fruit; this year both trees are full, nature thus doing what I think art may do, changing the bearing year of apple trees, and I see no reason why the same may not be done with other kinds of trees. I now ask, have we not some cause to believe that the bearing year of our Baldwins can be changed; and if it can, should we not give it our attention, and this for various reasons; first, it would be more convenient for the producer to have the crop equalized, the apples would be larger, fairer, of better quality—I mean higher flavored—handsomer, &c.;—second, the consumer would be especially benefited, for the price with the crop would be equalized;

he would not be obliged to pay two dollars fifty cents per barrel; neither would he be able to get them for one dollar twenty-five cents; good apples should be—and I hope I shall live to see the time when all kinds of good fruit, will be within the reach of every family, however humble their circumstances; but when they are worth from two and a half to three dollars a barrel, it places them beyond their reach; when they are very low, it is true they may buy, but they must, as we see, be deprived of apples every second year, which need not, and should not be the case. I intended last spring to have picked all the fruit off of some of my Baldwin trees, but in the hurry of business, neglected to do so. Should I live until the spring of 1854, I shall try the experiment on my Baldwins to considerable extent, and I would advise others to do the same and make known the result. I have Baldwin trees that bear odd years, from which I cut all my buds to work into nursery trees.

J. F. C. H.

Newton Centre, Aug. 30, 1852.

For the New England Farmer.

THE WEATHER.

MR. EDITOR:—Enclosed you have a memorandum of the heat during the month of July. The heat has been unusual. Twenty-six days of thirty-one the thermometer has been over eighty. Five days over ninety.

	At sunrise.	At 12 o'clock.	At 3 or 3.	At sundown.
1.....	60.	Rain & in.	80.....	68
2.....	67.	Rain & in.	78.....	64
3.....	55.....	73.....	00.....	67
4.....	54.....	82.....	00.....	70
5.....	59.....	88.....	00.....	78
6.....	61.....	84.....	00.....	65
7.....	60.....	86.....	00.....	70
8.....	62.....	89.....	94.....	78
9.....	68.....	94.....	96.....	90
10.....	64.....	94.....	00.....	83
11.....	65.....	87.....	00.....	78
12.....	73.....	95.....	00.....	83
13.....	74.....	Rain & in.	88.....	74
14.....	74.....	88.....	00.....	74
15.....	70.....	84.....	Rain & inch	78
16.....	55.....	86.....	00.....	79
17.....	55.....	Rain & in.	66.....	63
18.....	54.....	80.....	00.....	63
19.....	60.....	84.....	00.....	76
20.....	60.....	84.....	00.....	78
21.....	74.....	92.....	00.....	79
22.....	70.....	94.....	96.....	83
23.....	65.....	86.....	00.....	74
24.....	60.....	86.....	00.....	76
25.....	54.....	87.....	00.....	70
26.....	68.....	Rain & in.	74.....	63
27.....	58.....	76.....	80.....	64
28.....	54.....	80.....	85.....	67
29.....	67.....	85.....	00.....	71
30.....	67.....	87.....	Rain & inch	78
31.....	63.....	76.....	00.....	63

We have had, during this month, 2 3-16 inches rain,—a little more than we had in June; but vegetation suffered much more than it did in June. The weather has been exceedingly hot. Previous to the 26th, the top of the ground was very dry. The two last rains have relieved the top of the ground a little, but it will, without rain, soon be as dry as on the twenty-sixth. Probably the top of the ground has not been so dry for a number of years.

Corn and potatoes, in fact every kind of vegetation, has suffered more or less. Old pastures look dry, and cows complain, and are short of feed. We must stir the ground as often as we can in our gardens, to keep it moist. Stirring the ground deep does have a wonderful effect; no one that has not tried it can duly appreciate the benefit.

In 1805 we had no rain from June 25 until August,—thirty-five to forty days. Nor did we have a cloudy day from June 25 to July 25. In that year we had good crops of hay; but other crops were short.

In looking over my memorandum for 1847, I find the thermometer went over 80 twenty days in succession, and over 90 eleven times during that time, which was warmer than this month; that is, the degree was higher for the twenty days.

DANIEL LELAND.

For the New England Farmer.

GOV. ENDICOTT AN HORTICULTURIST.

BY S. P. FOWLER.

[Continued from page 439.]

The Orchard Farm, a grant of land of three hundred acres, by the Court of Assistants, was the place where Gov. Endicott first cultivated his trees, and planted his vines. It is very generally known, that this farm was situated in what was then within the bounds of Salem, or Nahumkeag, now known as Danversport. A more particular description of this place may be found on the 74th page of the *New England Farmer*, of the present year. We have said in our first communication that the land was first broken up by the plow, in the spring of 1633. On this occasion we may suppose that Gov. Endicott left his residence in Salem, to visit the Orchard Farm, and witness the operation of his new plow, probably brought over in the ship William, which arrived at Plymouth, on the 22d of February, of the same year. His usual manner of visiting his farm in those days, was by embarking in his shallop, and passing up Bass and Water's rivers, and landing at a small cove near his mansion. Upon leaving his house in Salem, which stood at the corner of Washington and Church Streets, he met his beloved ministerial friend and pastor, Mr. Skelton, and after passing the usual salutations, invited him to take a seat in his boat, and visit the "Neck of land," the worthy minister's lately acquired grant of two hundred acres, and adjoining the Orchard Farm. Mr. Skelton excused himself from complying with the invitation of his worshipful friend, by informing him he had been called to visit Roger Conant, jun., "the first born child in Salem," who laid sick of a fever. After a pleasant sail up the river, he landed at the cove, near the spring, where he found all things in readiness to commence plowing.

There were upon the grounds, waiting orders, William Poole and Edward Groves. Goodman Groves held the plow. What an interesting event are we about to record, which took place upon a fine day in May, in 1633! Probably nothing less than the turning up of the first soil to the sun in the county of Essex, with the plow share by one of the early Governors of Massachusetts. Here was substituted the venerated plow, for the rude implement of the Indian. The aborigines were accustomed, in the preparing of their grounds for the cultivation of corn, when covered with wood, to destroy the trees by beating off with stones the bark around their trunks, near the roots, thus girdling them. They would then open the ground among the dead trees, with sharp sticks, and plant their corn in hills. In 1637, there were but thirty-seven plows in all Massachusetts. The town of Salem in the same year passed a vote, granting

Richard Hutchinson twenty acres of land, "if he would set up plowing." And as John Blackleach, in 1638, had not "sufficient ground to maintaine a plow on his farm of 300 acres, the town for the furthering of his endeavours in plowing, and for his incouragement therein, allow him *more land!*" It is interesting to notice the high encomiums given by the early planters to the value of the Indian corn. But its value has never, as yet, probably been overrated.

The celebrated English cultivator, Arthur Young, once said, "that a country capable of growing Indian corn, was singularly blessed above all others." The Rev. Mr. Higginson, the teacher in the Salem Church, and the particular friend of Mr. Endicott, sent home to England, on the return of ship *Four Sisters*, a glowing account of the cultivation of the maize. He says, "The abundant increase of corn proves this country to be a wonderment. It is almost incredible, what great gain some of our English planters have had by our Indian corn. Credible persons have assured me, and the party himself avouched the truth of it to me, that of the setting of thirteen gallons of corn, he hath had increase of it fifty-two hogsheads, every hogshead holding seven bushels of London measure, and every bushel was by him sold and trusted to the Indians, for so much a beaver, as was worth eighteen shillings, and so of this thirteen gallons of corn, which was worth six shillings eight pence, he made about £327 of it the year following, when you may see how God bleaseth husbandry in this land." Aye, Master Higginson, God has continued up to the present day, to bless the labors of husbandry in this country, and we have the promise that he always will. It will be seen from this extract of one of the early planters, what was the quantity of corn raised upon an acre of ground, and the profits to be derived from it. And here it would be well, before we enter upon our calculations, to notice the appliances made in 1629, to stimulate the growth of corn. Master Thomas Graves, sent over by the company, as a man of science, and required to visit Nahumkeag, and exercise his scientific qualifications, when speaking of its soil, says, "It hath not at any time been manured, or husbanded." The principal or only manure used in the cultivation of Indian corn in those days, was the fish, caught in the bays and rivers, and these applied but once in three years. Woods says, when speaking of the soil of Salem, more than two centuries since, "For seven yeares together, it has brought forth exceeding good corn, by being *fished* but every third year." Then corn was planted in hills, where was placed one or more of the fish called alewives, hardheads, or blue backs, and required to be watched until they were decayed, which was usually in fourteen days, to prevent the corn being disturbed by the wolves, in their desire to obtain the fish. The mossbunker, or hardhead, is still used as manure, in some of the towns on Cape Cod.

Weirs for the taking of fish were placed across the Water's river, and fish was used probably in the planting of the first corn, in 1633, at the Orchard Farm. Now what was the amount of corn by the acre, produced by Mr. Higginson's friend, who avouched for the truth of it? I will commence my calculations, by supposing that six quarts of corn was planted to the acre, and that there were dropped fifty-two quarts. These fifty-two quarts

divided by six, would give us eight and two-thirds of an acre to be planted. The amount of corn produced on these eight acres and two-thirds, was 364 bushels—this, divided by the number of acres, would give us forty-two. We may then suppose that in the year 1629—42 bushels of corn to the acre was considered by the Puritans a good crop. The London or Winchester bushel made use of in the measuring of this corn, was used in England, from the time of Henry VII., to the year 1826. It is still in use in the United States. The average crop of corn per acre in Danvers, has been estimated at 57 1-2 bushels. In the county of Essex the same has been estimated at 54 bushels. Corn standing in the field was subject to many more depredators, than are to be found at the present day, which would probably serve to diminish their crops. In a diary, kept by the Rev. Mr. Green, of Salem Village, in 1711, we find the following: "Killed grey squirrels, that devour my corn exceedingly. They have eaten one-quarter of my corn. It is said there are millions of them in this village." Swine being permitted to run at large, became very troublesome in fields of corn, and after much legislation upon the subject of their restraint, a law was finally passed whereby any owner of a cornfield was permitted to kill any swine found in them. This summary manner of dealing with strays, in the olden times, no doubt had a good effect. But we are ourselves straying from our subject. Where is the old Puritan, Governor Endicott? This love of antiquarian lore, has led us sadly out of our way. We must retrace our steps, and find him. But it is time to close this communication, and having in the mean time found the Governor, we will endeavor, in our next article, to show how he cultivated native grapes at the Orchard Farm, and the manner in which he treated the proposition to cultivate tobacco in the plantation, &c. S. P. F.

Danversport, Aug. 27, 1852.

For the New England Farmer.

DOES THE STOCK AFFECT THE FRUIT?

MR. EDITOR:—Conversing a few days since, with a gentleman, of much experience in the cultivation of fruits, I inquired, if the stock has any influence on the quality of the fruit of the graft? Certainly, said he, I know it does.—I have seen it illustrated in many instances. He spoke with so much confidence, that I supposed that he must be right;—and that it was a well settled principle of vegetable physiology, that the stock does modify the character of the fruit of the scion.

Is this true, or is it not? If it be true, then what confidence can we have in perpetuating any particular variety of fruit. Take for instance the Baldwin, the most popular apple of the day; into how many thousand different varieties of stocks, has its scions been inserted? Has any one tried the experiment to know whether scions from the same tree, when inserted in stocks, yielding sour fruit, and in others yielding sweet fruit, will yield the same on different qualities of fruit, under like position and exposure? Here are interesting practical questions, to those who are desirous of growing orchards of fruit of the best quality. I wish your friend who answered me with so much confidence, would explain the reason for the faith that is in him. For, notwithstanding his confidence, I have doubts of the correctness of his views of the subject.

Danvers, Aug. 29, 1852.

P.

The proportions may be by weight, ten ounces of arsenic (*oxyde of arsenic*), five ounces of white bar soap, and one ounce of gum camphor; the arsenic and soap melted together over a slow fire, and the camphor added when the mixture is nearly cold. Since my communication on the subject, I have been informed that at the Patent Office, at Washington, the Taxidermists use, instead of arsenical soap, a preparation of about an ounce of arsenic in a gill of camphorated spirits. By the latter term, I understand, a saturated solution of alcohol with camphor gum. Add the arsenic and shake them up together in a bottle. I should think this preparation might be more convenient than arsenical soap. It is applied with a brush in the same way as the other.

I am glad to notice that this interesting subject is attracting attention.

Yours truly, HENRY F. FRENCH.

Exeter, August 30, 1852.

For the New England Farmer.

THE OAK PRUNER.

BY PROF. T. W. HARRIS.

SIMON BROWN, Esq.:—Dear Sir,—In my late communication on the *Oak Pruner*, I forgot to state that Professor Peck gave to it this very appropriate English name in the year 1819, when he described and figured it under the scientific name of *Stenocorus putator* also. *Pruner* and *putator*, indeed, mean the same thing, the latter being the Latin for the former. I think it probable that the apple tree, of which you sent to me a piece of the lower cut end, had been pruned off by the same kind of insect. The fact that it worked on this tree was new to me; but I recollect to have seen young pear trees, in a nursery, cut much in the same way, and perhaps by the same insect. It seems that the borer did not quite finish his work before the top of your apple tree fell over without coming to the ground; and he did not, as usual, retire into the hole in the upper portion, but was found in the lower or standing part of the tree. You inquire whether, "finding that the top part would not take him to the ground, he descended in order to go through another trial." It is possible this was his intent. Perhaps, however, by reason of a high wind the top went over before he was quite ready for it to fall, and before he had prepared to secure himself in the upper part. He seems to have had a harder job than usual from the beginning. You may remember I stated that the parent beetle lays her eggs singly, close to a leaf, a spur or a twig, and that the borer worm, when hatched, penetrates at the same spot directly into the branch. In this particular case, the borer seems to have found himself, when first hatched, on a small twig, growing out of the main branch. He entered the twig, followed that down, and then had to change his direction in order to pass into the main branch or stem. In this way, we may presume, his efforts were nearly exhausted before he had made a suitable burrow for his lodging in the stem; and that, meanwhile, his instincts impelled him to cut off the stem, because the time for cessation from labor was at hand. I hope I succeed in making myself understood. Insects differ from most other animals in being limited in their several stages of life to definite periods of time, beyond which their operations cannot be

extended. If, therefore, from any cause, an insect be much delayed or hindered in its duty, it has to leave it unfinished or imperfectly done, when the proper time for it has passed away. If you look into an old caterpillar's nest, you will sometimes find that some of the caterpillars, instead of leaving the tree and hiding themselves in snug quarters elsewhere when about to make their cocoons, remain in the nest, and make their cocoons there. This is because they were sick and weak; and when the time came for them to go, they had to stay behind and secure themselves on the spot as well as they could.

Mr. HENRY F. FRENCH, of Exeter, N. H., has sent to me a small branch from an elm, which he says has been "cut off by an oak pruner or some similar rascal;" and that his "oaks, near by, are badly cut to pieces by them." He saw the limb fall on the 15th instant, and secured the insects by plugging their holes. My opinion on the case he requests may be communicated to you. A portion of the limb is dead; but the cut end is living, though diseased. The dead part has been very irregularly and circuitously bored just under the bark; and near the bottom of the dead part there is a small round hole made transversely clean through the limb, apparently by a shot. Now this limb, besides and after being injured by the shot, has evidently been bored by more than one insect. Indeed, there are now two borers in it or in the fragments of it; one in a living twig, communicating with the bore in the cut end of the branch, the other in the smaller dead portion.—They are both alike, and are shorter than the oak pruner, and otherwise differ therefrom. I do not think these borers would have been found here, if the limb had been entirely sound. The oak pruner, the apple tree borer, and many others, are found only in sound or living wood; but there are some which attack only diseased or dead wood, and these in the elm seem to be of the latter kind. What the particular species may be, I am unable to tell. They would doubtless, in due time, have been transformed to long-horned borer beetles of some kind or other. Some prunings of my apple and peach trees, taken off two years ago, have been used for pen-brush, and for supports to tomatoes. This summer they are found full of borers, which have worked precisely like those of Mr. French's elm. They often cut off twigs from the size of a pipe-stem to the thickness of the little finger. Their burrows are mostly under the bark and very circuitous at first, but afterwards go into the pith when the twig is to be cut off. Some of them are in keeping to show what they will turn to.

Yours respectfully, T. W. H.

Cambridge, August 23, 1852.

REMARKS.—We feel under increased obligations to Dr. HARRIS for his kind replies to our notes and to that of Mr. FRENCH. Explanations of the habits of these curious, but somewhat destructive animals, are to us exceedingly interesting, and no doubt will be so to most of our readers. When Bacon said that "knowledge is power," he undoubtedly meant that it was a power over these little insects as well as over the winds and waves in navigating the ships of commerce or controlling the steam that impels us with such velocity. A

knowledge of the construction and habits of animals is not always power alone, but often *capital* to the farmer. Should he not be constant, then, in studying them, and patient in his investigations?

NOTE FROM A BROTHER.

Below are a few extracts from a letter from one of the editors of the *Michigan Farmer*, published at Detroit. The reader will observe his opinion in relation to deep plowing and thorough cultivation. It would seem needless to urge these points more, were it not that after all that has been said, thousands are half cultivating too many acres, and wondering why they cannot *make more money in farming!* Brother BETTS will accept thanks for his invitation to "eat salt" with him, and ramble again over the Peninsula State. We should not half so much fear the "Wolverines," as we should the *sinking and fiery steamers* in getting there.

Detroit, Aug. 19, 1852.

* * * * The weather is excessively hot and dry, and were it not for *very* heavy dews, vegetation would suffer severely. Pastures are parched and dried up.

The wheat crop came in good throughout our State. Corn will be a middling crop; the seed, owing to carelessness in sowing, failed to vegetate at the first planting last spring, and the crop is backward. Where proper care was taken to gather seed early and keep it dry, no trouble has been experienced. Grass and oats are light—potatoes also.

Such a season as this affords a thorough test of the great advantage of deep and thorough over shallow culture. The difference in favor of the former practice is truly astonishing. On a recent visit to the farm of LINUS CONE, Esq., of Oakland county, who is noted for his practice of deep plowing and subsoiling, he took us over a meadow from which he had just taken the hay, and seldom have we seen such a growth of grass. An acre was left standing for seed, and we should judge there was over three tons upon it. He had taken from the five acres cut, 30 loads of usual size, of cured hay. It was not what would be considered in New England good grass land, lying on the slope from a high ridge, and is naturally a heavy soil. The great yield was the result of *deep* plowing, thorough culture and drainage. A neighbor's field, much more favorably situated, yielded about a ton to the acre.

He uniformly gets good crops. Since he commenced the practice of deep plowing and draining, he says, the seasons are always good. His wheat is free from rust and insects, and he never suffers from drought or flood.

Truly yours,

CHARLES BETTS.

U. S. AGRICULTURAL SOCIETY. — We have received through the Secretary, Dr. LEE, the first number of the *Journal of the United States Agricultural Society*. We have only time now to express our gratification at the promptness and neat general appearance of this first-born of an association which ought to be of immense benefit to the world. We shall refer to it again.

For the New England Farmer.

ADDITIONS TO THE STOCK OF CULTIVATED PLANTS.

MESSRS. EDITORS:—In a recent communication I suggested the increase of the number of our domestic animals and cultivated plants by domestication and importation. It is in the vegetable department that this subject presents the most interest and importance. Its great value to the farmers of the State may be somewhat appreciated by the consideration of the great benefit to be derived to them, and to the agriculture and wealth of the State, by the introduction of only one plant, as of a new species of wheat that should be more productive, more hardy and more adapted to our meagre soils than any now known to us. But in portions of Europe and Asia are many species of this grain that have never been tried in this country. In France, among other varieties they have, of the common bald wheat, the white Flanders, said to be very fine and productive, but best adapted to good soils; the Hungary, of superior quality, very similar to the Chevalier, a most approved variety; the Pictet, the Saumur, much commended, coming to maturity a week earlier than others; the Tunstal or Hague wheat, one of the best in Norfolk, England; of bearded, the Saisette of Provence, said to be the best of that class, if not the best of all known wheats; the bearded March Tuscan, from the straw of which the fine hats are made; the Caucasian, the kind called in France Herisson, very productive, heavy, and of good quality, may be sown as spring or fall wheat; the red bearded March wheat, a beautiful variety, particularly suited, by its precocity, to late sowing. Of other cereals, both of those used for bread stuffs and for fodder, there are varieties unknown with us. But perhaps it is in the way of pasture grasses that we may derive as large a benefit from new kinds as in anything else. Many of our pastures are despicably meagre, ready to be fed not before June, beginning to be dry and short early in August, as reported by the milk, which is not likely to misrepresent in the case, and, in the best estate, feeding at the rate of five or six acres to a cow. Now it is no trouble at all to intermix this miserable provision for forage with earlier and later flowering grasses, so that the pasturage may be prolonged three or four months, and with others that would much improve the quality and increase the quantity of the feed. There are seven or eight species of clover known in the French agriculture; while, we think, only three or four are cultivated with us. There is the Buchara clover, growing seven to eight feet high, the Siberian Melilot, *Melilotus Alba*, which is well suited to poor and dry soils, though possessing some qualities which detract from its value, and said to have the bad effects as food which are attributed to clover, and in a greater degree, various kinds of lucerne, some of which are not unknown to our agriculture, and an innumerable multitude of grasses, some of which might, perchance, be found, on trial, to be very superior, or better adapted to our soils than any now in use with us.

There may be found, too, some very palatable esculents, which are now strangers to us, and which might be practicable to our soil and climate. The *psoralia esculenta*, or prairie potato, indigenous in this latitude on the western prairies, the wild rice

of Wisconsin, the upland or dry rice of Europe, rather, perhaps, to be named with the cereals, the *arracacha esculenta*, cultivated in Colombia, whose root is said to be equal to the potato: these and many others might, on trial, be found to furnish very agreeable and wholesome additions to the stock of food used for human sustenance, or some of them more profitable for feeding the animals of the farm than those in present use. And as cultivation is constantly introducing new varieties, some of the vegetables of the kinds now cultivated here, may be found in improved varieties among foreign farmers. In France they have a variety of the squash with red flesh, called the portmanteau Squash, very large and full, and the sweet squash of Brazil, flesh whitish, very sweet. In the same manner also, improved varieties of many of the most esteemed vegetables now forming a part of our daily regimen may be introduced into our culture.

I have seen described fourteen varieties of bald wheat and nine of bearded, of the common kind or *tritium vulgare* at present growing in France. In England, I think there are more. Perhaps the number of varieties in this country is not less. But it is still not unlikely that some kind may exist in some of the countries of Europe or elsewhere, superior to the best of ours, or better adapted to our soils. The English wheat is generally more productive than ours. This cannot be due to the soil, for the best soils in the West are wheat grounds. In Kent and some other counties of England, if I mistake not, Mr. Coleman reports over sixty bushels to the acre. It is true he says other fields in immediate neighborhood yield less than half of the others, but he more than hints that this is owing to bad or negligent cultivation. If some kind of wheat should be found so adapted to our soils as to make Massachusetts a wheat growing State, and instead of 2,300,000 bushels of corn and 30,000 of wheat, the amount of her present product, to produce the same amount of corn, and 2,000,000 bushels of wheat, which would be about in proportion to the yield of those two grains in New York, the difference in extent of territory being considered, it would be a very good increase of the agricultural wealth of the State.

I am aware that many persons will look upon the suggestions which I have made in this and the preceding communication, as unworthy of attention, because the result of attempts to introduce new and unknown products or animals into use must be uncertain, and may be therefore wholly profitless. But we cannot estimate the advantage that might ensue from the addition of only one plant or one new variety, that should be more profitable or better adapted to the sustenance of man, or for use in the arts or rural economy, or better suited to the soil and fitted to promote the industrial interests of the State, than any now known with us. If only one new vegetable should be obtained which should prove as valuable as Indian corn, wheat, or the potato, or if a new variety of either of these should be found entirely superior to those we have; if old hard-faced Massachusetts could be converted into productive wheat lands, or if her pasture grounds could be doubled in capacity, such results would be worth a much greater effort and expense than is to attend their importation and experiments to ascertain their value or their tillable quality.

Essex, Aug., 1852.

W. J. A. B.

ANGRY WORDS.

BY D. C. B.

Angry words are lightly spoken,
In a rash and thoughtless hour;
Brightest links of life are broken,
By their deep, insidious power.
Hearts inspired by warmest feeling,
Ne'er before by anger stirred,
Oft are rent past human healing,
By a single angry word.

Poison-drops of care and sorrow,
Bitter poison-drops are they,
Weaving for the coming morrow
Saddest memories of to-day.
Angry words! O, let them never
From the tongue unbridled slip;
May the heart's best impulses ever
Check them ere they soil the lip.

Love is much too pure and holy,
Friendship is too sacred far,
For a moment's reckless folly,
Thus to desolate and mar.
Angry words are lightly spoken,
Bitterest thoughts are rashly stirred,
Brightest links of life are broken,
By a single angry word.

Bloomington, Feb., 1852.

Dollar Newspaper.

AGRICULTURAL GEOLOGY.

BY JOSIAH HOLBROOK.

No. III.—ELEMENTS OF ROCKS.

Rocks are the oxides of metals. Silica, the most abundant ingredient in rocks, mountains, and soils, is the oxide of silicon. This oxide constitutes nearly one-half of the solid matter of our globe. It is the principal element of quartz, in all its varieties, which are exceedingly numerous, and some of them very beautiful. Quartz is the only mineral found every where. Sand is pulverized quartz. Pebbles are fragments of quartz, rounded by attrition. Gunflint is quartz, breaking with a conchoidal (shell like) fracture. Jasper is red quartz, with a fine compact texture. Amethyst is purple quartz, frequently found in six-sided crystals, which is the common shape of quartz in its different varieties. Agate is clouded quartz in numerous varieties, some of which are much used for watch-seals, finger-rings, breast-pins, and other ornaments. Cornelian is a quartz of fine texture, and of a yellowish red color. Chalcedony, blood-stone, catseye, and many other gems, are varieties of quartz.

Most, perhaps all, the gems used in the breast-plate of Aaron the high priest, were quartz of different textures, colors and hues. The precious stones presented by the Queen of Sheba to the King of Israel were probably quartz. The stones mentioned in the Book of Revelations, as forming the streets of the New Jerusalem, with all the gems referred to, were but varieties of the stones used for paving our streets, and of the earth mowed by the plow and the hoe of the farmer, and of the dirt carted for filling our docks.

The coloring matter giving most of the beautiful hues to gems, and an endless variety of colors to quartz, is the oxide of iron. The oxide of silicon and the oxide of iron are hence united in this same most abundant mineral in the world.

Next to quartz, felspar, or clay formed by the decomposition of felspar, is the most abundant element for soils. This, too, is composed of several

oxides of metals in chemical combination. Felspar is also very extensively united with quartz in the formation of rocks, not by chemical combination, but mechanical mixture. The felspar and the quartz can be separated by the hammer. Not so with the oxygen and silicium, forming silix. Chemical agency alone can separate chemical combinations. Such combinations in rocks, soils and other mineral bodies are exceedingly numerous, complicated and delicate. The most common stone that meets the eye in any part of the world is composed of two oxides. The oxygen and the metals are each united by common affinity, and then the two oxides are again combined by the same agency to form a "common stone," evidently worthy of more respect than it commonly receives.

An Experiment.—Pour upon a little pearlsh in a tumbler some strong vinegar. An effervescence will follow, producing carbonic acid. A burning candle immersed will be extinguished, showing that carbonic acid is fatal to combustion. It is equally so to life.

NO. IV.—ELEMENTS OF SOILS.

Felspar is composed of four oxides—silix, alumina or clay, iron, and potash; silix predominates. Of quartz, in all its varieties, it is almost the entire element; of felspar, it is the principal; aluminous or clay soils contain frequently twice as much silix or alumina; the quantity of iron and potash in felspar is small, not often over two or three per cent.

It appears then that sand is composed of two oxides or chemical combinations again combined by the same agency. Felspar or clay is composed of four oxides, also combined by chemical affinity, to form a compound still more complex than quartz or sand. The quartz and felspar are combined by a mechanical mixture to form rocks and soils.

It hence follows, that in these two elements of soils, quartz and felspar, or sand and clay, are not less than six combinations of ultimate principles, or oxygen and metals, all by chemical affinity, and two combinations at least of those compounds forming those two elements. These six chemical compounds, again compounded by chemical agency, are then united by mechanical mixtures to form rocks and soils.

Quartz and felspar are not only the essential elements of soils, but also among the most important materials in the arts of civilization. The principal material of glass is quartz; that of porcelain, felspar. The presence of potash, soda, or some alkaline substance acting as a flux, is indispensable in the manufacturing of each of these important articles of domestic economy.

After performing the important agency of producing vegetation—of course furnishing our wheat, our corn, our beef, and our pork—quartz of a porous character constitutes the French burr, for changing grains into flour. Pulverized quartz, cemented by iron into sandstone, forms our grindstones, for sharpening the axes and chisels of the mechanic and the knives and scissors of the housekeeper. For some animals it is essential to the process of degestion; fowls cannot live without it.

Every thing animate, and inanimate; every product of nature and of art; every human being in every position and condition of life—the sturdy farmer, the busy mechanic, the industrious housekeeper, the delicate refined lady, the polished gen-

tleman, the enlightened teacher, the wise statesman, and the noisy politician; in a word, every thing which has physical existence, bears visible testimony to the necessity of this important element of mountains, rocks, and soils—of quartz, sand—"a common stone."

Experiment.—Shake a tumbler, containing a little newly-slaked lime and some water; let the tumbler stand till the lime settles and the water becomes clear; pour the water into another tumbler and blow into it air from the lung through a quill or pipe-stem; the clear water becomes turbid with white flakes or sediment, by the carbonic acid from the lungs uniting with the lime in the water, forming the carbonate of lime.

PRUNING.

Few of the duties of the farm are so badly performed as that of pruning—bad in the manner in which it is done, and in the season of the year usually selected for the operation. Trees are living, sentient things, and must be treated as such.—Their young bark is as vulnerable to hob-nail boots as the back of the hand, and as easily mutilated by a dull saw or knife. No skilful surgeon would amputate a limb with dull instruments, or leave the bleeding wound exposed to the air; but many farmers who have pruned for forty years, and think they "know a thing or two" about it, do both. They have seen the tree put on its green livery in spring, blossom, perfect its fruit and increase in stature, and when it had performed its labors for the season, throw off the foliage which it no longer needed, and spread its broad limbs resistless to the winter winds. Thus they have seen it live and breathe, and grow, and yet never seem to have appreciated it as a living friend, inviting them to its shade, regaling them with its fruits and almost speaking in accents of affection!

Away with the axe, the coarse saw and all dull tools about your trees, and in their places use those of the best make, and with edge as keen as Damascus blade.

Every wound that is made should be covered; if the tree is vigorous, and the place small, it will probably grow over, but covering greatly aids the effort of the tree in perfecting its outer garment. Paint, clay, gum-shellac and waxed cloth are used for this purpose; the shellac and cloth are certainly excellent. The shellac is dissolved in alcohol and applied with a brush; the cloth is spread with grafting wax made rather soft and applied with a brush while warm. A strip of this tied round a wound, or a patch stuck on over it, will greatly facilitate the healing process.

Ninety orchards out of every hundred are mutilated and injured in being trimmed. Limbs that ought to be cut off are preserved, and those that ought to be retained are taken away. Some are sawed partly off, are allowed to drop, tearing away the wood and bark from the under side and leaving a ragged and ghastly wound, that never heals,

bat brings premature decay. This is strong language, we are aware, but a careful inspection of most old orchards will confirm it.

There is need of but very little pruning where an orchard has been properly managed from the start; no large limbs will ever need to be taken away, unless broken by winds or injured in some other way. *Prune but little*, is a good motto. Suffer the shoots which start out on young trees to remain till autumn, when they have shed their leaves. The tree needs them, [and Nature, ever ready with her helping hand, sends them out to aid the leaves of the top in elaborating the sap and increasing the whole growth of the tree. We find in an exchange a case in point which we give as confirmatory of our theory. A correspondent of the *Prairie Farmer*, published at Chicago, Illinois, states that he pruned young apple trees four to six feet high, early in spring, and then kept the shoots rubbed off the lower parts of the stems, leaving only suitable heads,—on one-half the trees. The others were left with their shoots untouched from top to bottom. The result was, that those which received no summer pruning were 25 to 40 per cent. larger than the others, even after they were pruned up to heads the following spring. So it may be noticed in older trees that when most of the limbs are cut off in the process of grafting, large numbers of suckers are thrown out, and we believe for the same purpose that shoots are on young trees,—to keep up a proper circulation and balance in its powers.

As to the best time for pruning apple trees we have no doubt. From personal experiments made for several years, from reliable books, conversations with practical men, and a pretty extensive examination of orchards, we are fully of the opinion that the autumn, after the leaves have fallen, is the most proper time. Where we have carefully pruned at this season it has never been followed by a flowing of the sap and that discoloration of the bark which follows spring pruning. The wounds either heal over or become so dry and hard as to prevent decay, and the tree seems to sustain no check or injury whatever.

The head of the tree should be kept open to the air and light and free from limbs crossing and rubbing against each other. Cut out these and the occasional dead limbs which may be found, and the orchard which has been well managed will need little more in the way of PRUNING.

TO CORRESPONDENTS.—The articles of our correspondents sometimes remain longer on hand than we desire. We give them place, however, at the earliest moment consistent with many circumstances, always existing, but hardly necessary to explain here. It is to the able articles contributed by them that much of the extraordinary success of the *Farmer* must be imputed. They will be pa-

tient with us, we trust, remembering that their facts and opinions are not brought to the light for a mere ephemeral purpose, but are recorded in an enduring form, and will be matters of reference and instruction long after they and we have left this stage of action.

For the New England Farmer.

A NEW GRASS.

[The following article was intended by its writer to be published in the *Maine Farmer*, but for some reason it did not appear there. Although it comes somewhat in the form of an advertisement, we give place to it, being desirous to aid in the introduction of any new variety of grass which promises to prove a public benefit.]

DEAR SIR:—I think it is known to the readers of your paper that I have obtained seed from a single plant, of a new kind of grass of surpassing luxuriance, found in a turnip field, raised from imported seed, and dressed with guano, (of course, of foreign origin,) transferred to my garden, and by subsequent analysis found to be a species of *Bromus*; and that I have sold seed to a few persons, for their own use only, at \$10 the barrel; and for a less quantity, requiring a pledge that it should not be allowed to go to seed, at \$4 the bushel. Thus reserving the sale of seed to myself, while making protracted experiments to determine the best adapted soil, time of sowing, quantity of seed, whether alone or with spring grain and other kinds of grass seed, for pasture, mowing summer-soiling, to plow in green as a fertilizer, and as feed for horses, sheep and dairy cows; and also with the seed, given to stock, swine and poultry,—dry, boiled and ground. Suffice it to say here, I have witnessed the most satisfactory results of my own experiments, and so far as I have heard from others, not the first word of complaint. Our Agricultural Society's committee on farms viewed my pasture sown with this grass, and some acres just ripening, high as their shoulders, and saw in a mow three tons of this fragrant hay, cut from one acre. The President, Hon. J. W. Lincoln, said, "It is well worth a journey from Worcester to see this splendid grass." They made favorable notice of it in their "Annual Report." Some extracts from this reliable document, (if it has been sent you,) as well as my letter to Hon. J. Davis, chairman of the meeting for agricultural discussion in the State House, in February,—subject, grasses,—would give information and additional interest to your columns. This letter appeared in the *New England Farmer* for June, and the *Massachusetts Ploughman*, April 17.

My principal object now is, to express my wish to distribute what seed I have in time for the autumnal sowing, *without restriction*, and hereafter to share in common all its benefits with the yeomanry of our republic. For this I make the first offer to your State; to any agricultural society or dealer in wares and seeds, who will send me, (with their address,) \$100, to put up ten barrels of clean *Bromus* seed, and deliver immediately at our railroad depot, marked and directed according to order; or if preferred, forty bushels in bags. Same time, if desired, I will furnish a particular description and directions concerning its properties and culture, as learned from my various experiments.

I shall make a similar offer to some of my correspondents in the western States, and continue to meet the increasing demand from New England. Of course the earliest applicants will be sure of obtaining, till all is gone, which would scarcely give a barrel to a State. Should this all be retailed, and sowed this fall, and all be saved for seed next harvest, (though it yields "some thirty, some sixty and some an hundred fold,") it will be in a few hands, having small patches, compared with the fields of the union, to which its proprietors must look for the seed of a grass just beginning to be known and appreciated. Years must elapse before the country can be supplied, as it now is with herds-grass and clover seed. My offer invites co-operation and participation in the profits and pleasure now available. I quote from the agricultural committee's "Report," alluded to:—"If they [a jury of cows] confirm the opinion of Mr. Willard, as to the superiority of the grass, then will the agricultural community owe him a large debt of gratitude for having introduced to notice here a species of grass which is highly beneficial on light, sandy soils, much superior to any other species, and producing most abundantly on land of better quality." Very truly yours,

BENJAMIN WILLARD.*

* Will the Maine Farmer please copy.

For the New England Farmer.

POTASH ON TREES.

MR. EDITOR:—A few months ago, in looking over the *New England Farmer*, I was not a little startled by an article from Mr. Coffin, stating the pernicious effect of lye as a wash for trees, as I had just treated about a dozen of mine with a pretty pungent preparation of the same. But though his were killed, mine are doing finely. The lye which I used was so strong as greatly to discolor my hands and nails, and I am quite sure the wash was rather more than a pound of potash to a gallon of water. I moistened a sponge and passed it once over the bark—simply wetting it. No doubt the trees would have absorbed more had I applied it, and perhaps to their injury. Was it not too much potash which Mr. Coffin applied rather than the strength?

I believe in the good effect of potash wash for young apple trees, as it easily erases the moss, prevents its further accumulation, obstructs insects, and gives the trunks a good color and healthy appearance. But in future I shall be on my guard as to its strength. L.

Roxbury, Aug., 1852.

REMARKS.—The decision expressed in the last sentence above is just what we have desired to accomplish in regard to the use of potash water.—That every body "shall be on their guard," not only as to its strength, but as to its application. How carefully our correspondent used it. "I moistened a sponge," says he, "and passed it once over the bark—simply wetting it." Now that is a sensible use of so caustic a substance, and would rarely, if ever, be injurious in such hands. A tree is not a stock or a stone to be kicked and cuffed and cauterized and scourged with impunity. It lives, breathes and feels, and if it were a step or two

higher in the scale of existence, would die from mere disgust at the treatment it often receives. But, we have no crotchets to cherish on this subject, and mean to avoid a dogmatic and opinionated spirit everywhere.

EFFECT OF IMAGINATION ON COWS.

It is well known to all breeders that try as much as possible to get a pure and well marked stock—now and then a singular exception will occur to throw all their notions and principles into confusion. Several theories have been brought forward to account for this fact. One is that in the various crossings that have taken place, some peculiarity of a forgotten ancestor, after having lain dormant for several generations, has reproduced itself. This is admitted as an undoubted principle in human physiology, and without it sad work would sometimes be made in families. We have in our mind, a family where both the parents are of dark complexion, black hair and eyes, and when one of the children has red hair and light blue eyes. This seeming anomaly is made to be a plain affair, when we know that in the mother's family one of the parents was possessed of a red head with blue eyes, and a portion of the children had a similar complexion. The same principle holds good of diseases. Certain hereditary diseases may not be visible in an entire generation, and yet make their appearance in the next generation.

Another theory, by which these exceptional products are accounted for, is that if a cow or a mare have young by any particular male, the young while in the womb and possessed of a nature, constitution and peculiarities similar to and derived from said male, produces a change in the nature, blood, constitution, &c., of the female, to such an extent, that in any after connection with a different male, there is a liability that the taint of the original impregnation may manifest itself in those succeeding. Facts apparently incontestable, have been brought forward to sustain this position. That all the results as yet witnessed, not assignable to the first theory we have mentioned, may be to another, should "give us pause" from any haste to adopt the notion.

The third theory to which we have alluded, is the effect of the *imagination on the mother*.

That this is a powerful force in the human race, cannot in the least be doubted. Too many well authenticated instances of monstrous births, as the result of excitement to the mind of the mother, have been recorded in scientific works, to admit of a doubt. Every one has some instance of the kind in mind.

The imagination of the brute is lower in the scale, as regards power of extent, or quickness of action—but is not different in every essential particular. Hope, fear, love, friendship, disgust, &c., are as really properties of the mind of brutes as of the human mind, and may be expected to produce the same effects.

The memorable instance of the bargain between Laban and Jacob relative to the division of the herds, is in every mind. Jacob was to have as the wages of his labor, all the "ring-streaked and spotted" of the cattle, or the brown sheep of the flocks. Laban, an avaricious and selfish man, immediately removed every animal that possessed these peculiarities from the flocks and herds, and

gave them to his sons, and put under Jacob's charge only those that remained. Jacob resorted to influence over the imagination, to secure for himself a fair return for his labors. He "took rods of green poplar, and of the hazel and chestnut tree, and pilled white streaks in them, and made the white appear that was in the rods." He placed these rods by the brook, or the gutter of the watering trough when the flocks came to drink, "that they should conceive when they came to drink." To show clearly that the effect produced was through the eye and mind of the individual operated on, it is remarked, "And it came to pass whensoever the stronger cattle did conceive, that Jacob laid the rods before the eyes of the cattle in the gutters, that they might conceive among the rods. But when the cattle were feeble, he put them not in, so the feeble were Laban's, and the stronger Jacob's."

An instance is recorded that a pure blooded polled cow was served with pure blooded red polled bull. During the day, however, she had been with a red and white horned ox. The calf produced was red and white, and horned.

An instance was related to us as having occurred on the Manchester City Farm. A red cow was served with a red bull. Afterwards the cow was with and had quite an attachment to an ox peculiarly marked with white. The calf was marked with white as was the ox.

We need more careful observations relative to the results of breeding. There can be, however, no mistake in saying that all breeders should seek out the best animals from which to breed. By best animals we do not mean the best accidental animal, but one who has been closely bred for some years.—*Granite Farmer.*

For the New England Farmer.

MR. WEBSTER'S FARM.

FRIEND BROWN:—I had the pleasure, a few days since, of looking at the mansion-house, stock, crops, &c., of the distinguished *Farmer of Marshfield*, the Hon. DANIEL WEBSTER. When I arrived at the place in the afternoon, he was engaged in his favorite recreation of fishing. In compliance with an invitation, I called the following morning, when he kindly accompanied me to take a look at his cattle. Among them I noticed an Ayrshire bull, the finest I have ever seen in the country, and the stock generally is of the highest character in most of the points that go to make up our best cattle.

After a cursory look at the stock, Mr. Porter Wright, the superintendent of the farm, very politely answered my numerous inquiries, and showed me such parts of the place as I desired to see. He states that the farm contains about 1800 acres of land; 300 acres of it is woodland, 300 salt meadow and 200 English grass. They cut 300 tons of salt hay each year, and 175 tons of English hay. They have 75 head of neat cattle; among that number are 10 yoke of superior oxen. They have 25 hogs, 200 fowls of various kinds, 75 sheep, imported stock, South Downs, &c. They plant 35 acres of corn, 12 of turnips, 10 of potatoes, 2 of carrots, 2 of beets, 6 of buckwheat, 7 of rye and 7 of wheat. There are 3000 fruit trees on the farm, of all varieties and rare fruit. There are 25 buildings, including 7 dwelling-houses; one of the houses be-

longed formerly to the heirs of Gov. Winslow, and is 175 years old. It is in a dilapidated condition, and is not occupied by any one. Twenty-five men are employed on the farm through the year. They use 1500 tons of manure per year; a great proportion of it is kelp, which they get from the seashore. Mr. Wright says it is good to make into compost manure, and it does well to plow in green. There are a number of different soils on the farm; clay, loam, sand, peat, muck, &c. After examining the fields and meadows, we returned to the house, and took a look at the garden, which was very fine indeed. It contains about two acres of fine land, abounding with the best and rarest fruits and fragrant flowers. Beyond the garden at the south, there is an artificial grove, and summer house. About the centre of the farm, there is a high elevation overlooking most of the farm and surrounding country, and far out in the sea. Upon this eminence, Hon. Abbot Lawrence erected a liberty-pole, surrounded by an American eagle,—a fit and appropriate emblem of the defender of the constitution. The library is in the north wing of the mansion, containing the portraits of Lord Ashburton, Mr. Webster, and his son who died in Mexico, and filled with books of all descriptions and languages.

TIME FOR PRUNING.

Volumes have been written on this subject, a great part of which is mere theory. Many prune in the spring from custom, and others in June because the wound heals quickly, not reflecting that it is of more importance that the wound heal soundly than quickly. We give directions according to our experience for thirty years.

Slight pruning, in which very small limbs, or dead limbs of any size, are removed, may be performed, when most convenient, in any season. Moderate pruning should be done in June, July, or August, though it will answer very well till Dec. If trees are pruned in July, Aug., or Sept., the wood will become hard, sound, and well seasoned, and commence healing over; and it is not material, otherwise than for appearance, whether it heals over the first, second, or third year, as it will remain in a healthy state.

We should prefer Oct., Nov., or even Dec., to the spring, which is the worst season. The trees then are full of sap, and it oozes out at the wound, which turns black and decays, like a tree cut in the spring, and allowed to retain the bark. But if limbs, ever so large, are cut in Aug., or Sept., the wood will become hard and remain so, if it never heals over.

Thirty-two years ago, in Sept., we cut a very large branch from an apple-tree, on account of injuries by a gale. The tree was old, and it has never healed over; but it is now sound, and almost as hard as horn, and the tree perfectly sound around it. A few years before and after, large limbs were cut from the same tree in spring; and where they were cut off the tree has rotted, so that a quart measure may be put into the cavities.—*Cole.*

THE BLACK EXCRESCENCES on the shoots and limbs of plum trees are now coming, and they sometimes break out on the bodies of small trees in such a way that it is difficult to remove them with the knife, without cutting away the whole tree. I

have this summer had three such cases, and have cut off most of the tumor and wet the remainder with spirits turpentine. The tumor in each case has ceased to grow and has perished. In the first instance the turpentine spread a little around the sore, and destroyed the life of the bark as far as it went. I was after that careful to wet only the tumor. The sores were on trees that I set this spring. None came on trees that I have kept for a few years with the ground well manured and salted. I esteem them a *scrofulous* disease of the tree.—S. C. HAMILTON, Buel, N. Y.—*Genesee Farmer*.

FRUIT GROWING.

The *Farmer's Monthly Visitor*, in urging the people of New Hampshire to grow fruit, has the following encouragement:—"In East Bradford, Mass., about six rods from the Merrimack, stands an apple tree fifty-four years old. It is a black russet, and is surrounded on the north, west and south by a barn, pig-stye and house. Its roots pass under the barn and stye; the hens and turkeys roost on its top. It is of course strong and healthy as stimulant can make it; its branches almost reach the ground. Thirty-five years ago, when that tree was nineteen years old, it produced nineteen bushels of apples! These apples readily commanded \$1.50 per bushel. And for thirty-five years it has not produced less than thirty-five bushels yearly—and one year as many as thirty-three bushels! We name the striking fact to show that trees should be planted in every nook and corner where they will have nutriment; and if the fruit be selected with great care, pleasure and sure profit will arise from planting.

"And farmers are sure to find a market. Why in Manchester alone, it is estimated that five thousand barrels of apples are consumed annually. One confectioner here tells us that he retails at his counter four barrels per week; two hundred and eight barrels a year sold by the copper's worth! and at one counter! He also tells us that four years since, during the peach season of two months, he sold two hundred and fifty bushels of peaches—something more than four bushels per day. Then of peaches there must have been sold in Manchester, in 1848, two thousand bushels! Then of apples and peaches, there must be sold in Manchester alone, not less than \$12,000 worth annually. In Concord, Nashua, Portsmouth and Dover, not less than \$5000 worth of these same fruits are consumed in each town; and in Lowell not less than about \$55,000 of these productions annually. This market is now principally supplied from places south of us. The farmers of New Hampshire should supply much of this produce."

TO MAKE A HORSE FOLLOW YOU.—You may make a horse follow you in ten minutes. Go to the horse, rub his face, jaw, and chin, leading him about, saying to him, "Come along;" a constant tone is necessary. By taking him away from other persons and horses, repeat the rubbing, leading and stopping. Sometimes turn him around all ways, and keep his attention by saying, "Come along." With some horses it is important to whisper to them, as it hides the secret and gentles the horse; you may use any word you please, but be constant in your tone of voice. The same will cause all horses to follow.

For the New England Farmer.

MUSK-MELON SEEDS.

MR. EDITOR:—Having been a constant reader of your excellent paper ever since its commencement, I take pleasure in saying that I consider it the best family paper in the Union; and so long as I can "raise the wind," I intend to be a subscriber.—Consider me a life subscriber. I now take some six or eight different newspapers, but the *New England Farmer* heads the corps.

Enclosed you will find a new variety of muskmelon seed, which I obtained from one of the planters on the Saluda River. They were brought from the Island of Cuba last season, are of an excellent flavor, and of a mammoth size; some of them will compare in size to the marrowfat squash. I could obtain only a few, and as I thought I would not be selfish, concluded that some of my New England friends would like to try them. If you consider them worth the trial to plant, you can do so, and thus forward the cause of improvement.

Very respectfully yours,

GEORGE T. PECKHAM.

Graniteville, S. C., Aug. 5, 1852.

REMARKS.—That "every man has his weak spot," is a proverb as true as it is trite; but weak or strong, no man, who labors earnestly to do good, whether in the field, at the bench, in the marts of trade, or at the desk, can remain insensible to the opinions of those for whom he labors. To us the good opinion of those for whom we cater from week to week is a "tower of strength," encouraging us onward and upward in the noble work designed by the Creator for a large portion of the human family. We thank friend P. for his kind words and act in sending us seeds. If fruit from the seeds is found better than we now have, it shall be scattered and known as PECKHAM'S Cuba Melon.

MIDDLESEX AGRICULTURAL SOCIETY.

The following remarks are copied from the *Middlesex Farmer*, and we hope every farmer in the county who is not a member of the society will read them. Send along the V, brother HILDEBETH, and the Diploma shall be forthcoming.

"We thought when the offer was made by the society last spring, of holding the Cattle Show and Plowing Match in that town from which the most new members would join the society, that there would be quite a spirit of emulation awakened in our farmers in large towns of the county. The society needs funds, and had the farmers of Groton, Framingham, Cambridge and Malden, felt as great a zeal in forwarding a cause devoted to their own interest, as they do in pushing forward a political candidate of this party or that, it would not in all probability have done them as much or even more good.

"We don't expect that we shall this year induce the society to hold their Show in Westford by our own individual exertions, but, Mr. Secretary, put us down as a member and the \$5 William shall be paid over according to the bye-laws."

*For the New England Farmer.***FARMERS' SONS.**

When a young man leaves his home in the country for a less desirable one in the city, or elsewhere, the inference, as a general thing, is either that he is "spoiled" by indulgence on the part of the parents, or by certain influences which may have fallen upon him, led to despise labor on a farm, and induced to seek a less laborious and more easy mode of life. That these are not the *only* causes which induce boys to leave a good home and farm, the following sketch may perhaps show.

"I am really very glad to see you, Mrs. Gove, this afternoon. Do you know that it is nearly a whole year since I've had this pleasure, and you my nearest neighbor?"

"I did not think it was so long, but—but, I have a great deal of care."

"Yes, you certainly must have. Let us take our work and sit on the piazza; it is much cooler there and secluded from the sun."

"Can we see our meadow from there, Mrs. Norton?"

"Let me see—O, yes, very well."

"Mr. Gove, with the men and Billy, have gone down to the lower field fencing, and he wished me to have an eye on the meadow, as that fence is all down and our cattle are in the road. I see you have finished planting, Mrs. Norton. You have every thing done in season, and yet you never seem hurried, or fretted. You must take comfort."

"Why, as to that, we feel that there is nothing worth doing but is worth well doing; and feeling thus, we own but little land, a small farm compared with yours, and we find no difficulty in having our work done at the right time."

"Yes,—and I can hardly realize, Mrs. Norton, that this is the same place where I played, when a child, 'tis so changed, and so beautifully changed; these handsome trees—why in this very spot twenty years ago a sand bank 'twas, in which nothing grew but dock and tansey. I used to get the double tansey for grandmother, to color her cheese with. I am not surprised that my Billy should say, as he did to-day, that he was never so happy as when he was under the ash tree down by the spring. Really, Mrs. Norton, that is the only one near our house, and that is fast going to decay.—You have vines, trees and shrubs, and beautiful flowers; why, it seems to me these things must tend to make home pleasant."

"You are right, Mrs. Gove; we feel that by cultivating a taste for the beautiful in nature, we improve the character and soften the heart."

"I know you are right, and not for my sake, but on Billy's account, I wish I could make Mr. Gove think as we do. But perhaps I do wrong to speak in this way, for Mr. Gove has more care now than any one man ought to have, and I know that he has no time for any thing but barely to take care of what he has, without making any improvements. But I am in hopes when William grows up, that he will get time to set trees and make our home pleasant, for a more ardent lover of nature I surely never saw."

"Mrs. Gove, of course your husband knows his own business, but I've often thought that it would be for your interest all round, if your husband had less land to care for. I mean, if he would sell some, it certainly would lessen his care as well as your own."

"Perhaps so, but really Mr. Gove doesn't think it looks just right for a man to part with property which has been handed down from father to son, until it is now in the fourth generation. 'Tis true I have a good deal of care, and must work hard, but I have no reason to complain, though 'twould be very nice, what little time I have to sew, to sit in such a cool, delightful place as this. Perhaps I'm all wrong, and think too much of these things."

Mrs. Gove was returning from the visit to her neighbor, which they had mutually enjoyed, when a pat on the shoulder caused her to exclaim, "Are you tired, Billy?" as she gazed earnestly at that pale face, and sought to read the language of those dark and handsome eyes. "Are you tired, my dear?"

"Yes, mother, O, I am very tired; for don't you think after I had helped father as long as he had any thing for me to do, I went into that pretty grove where sis and I played the week before she died, and there, right by a little mossy bank, was a little larch tree, and mother, I wanted very much to dig it up and bring it home, and set it out by your bed-room window. I am sure, mother, it would look beautifully there, and then I never should see it without thinking of little Alice."

"Did your father take it up for you?" said Mrs. Gove, as she strove to force back the tears that would come.

"No, mother; I took the spade and tried; I dug all round it, but I couldn't start it a bit, when I tried to pull it up, and then I asked father if he would let Mike take it up for me. You know, mother, that Mike is a good hand, for he helped take up and set out all Mr. Norton's trees."

"And what did your father say, my dear?"

"He said, 'don't be so foolish, child—we've no time to fool away,' or something of that kind. I wish I had strength to pull it up; but I don't know as father would let me set it out. Do you think it is foolish, mother?"

"My dear child, your father has a great deal of care and anxiety, and you heard him say this morning, when the man called to tell him his fence all lay flat, and everybody's cattle were in, that his work was driving him continually; so perhaps father thought 'twould be wrong to spend the time that is now so precious to us, in doing what we could get along without doing."

"Well, mother, does father take much comfort? He is always behindhand, and he never finishes all the jobs he begins. Why, don't you know last summer we had so much to do that we did not get time to hoe that piece of corn between the woods, and I heard father say myself, that it did not begin to pay for the plowing. And mother, you know I heard it talked over at the store, how father had to pay for that strip of land he bought of Mr. Chase, twice, because he did not get time to make the deed, and Mr. Chase died before 'twas done. When I hear people say to father, 'you are the richest man in town,' or, 'you own the most land,' why, I think, well, I don't see as father is any happier than the neighbors, that have n't half as much. Why, I heard father say to-day that he was harrassed to death."

The night after the above conversation, as Billy was quietly sleeping, and Mr. Gove sat with his arms folded, and his eyes resting on the wall, Mrs. Gove asked her husband, in rather a timid tone, if

he had noticed how fully Mr. Norton's fruit trees had blown.

"Well, I believe I saw them, or heard some one speak of it. But I am tired."

"Yes, I think you must be; you've worked hard all day."

"I have worked like a dog, and what does it amount to?"

"Do you think," said his wife, "considering we have to work so hard and hire so much help, that it is for your interest to keep all the land?"

"Think—I don't think any thing about it. I've got it, and I must take care of it. I should look well spending what has so long been in the family. As long as property is in land it is safe; but change it into money, or any thing else, and ten to one 'tis soon gone, nobody knows where."

"Perhaps you are right; but it seems to me you could take much better care of less, make it more profitable, and at the same time relieve yourself of this care and anxiety, which I fear is wearing upon you. And then you know William is slender. I don't think he'll ever be able to work as hard as you have done."

"He never will, if he is brought up to think he is too good to work. He has notions in his head now that I fancy will do him no good. You have been over to Norton's this afternoon. I suppose his wife advised you what was best for us to do.—Why, Betsey, can't you see through it all? They have been and sold half of their farm, and laid out the money in trees and I don't know what all,—sent the boys to school instead of teaching them to work, and so she wants us to do the same.—Ha! ha! misery likes company. The long and short of it is, Betsey, Mrs. Norton wanted to get rid of work. I wish they had sold the whole concern and cleared out, for I see plainly you nor William can go over there but it bewitches you. No—you never will see me covering my land, or surrounding my house with *boughten* trees. If I had time I should like well enough to set out a maple or something near the house. I should like one or two for the horses to stand under, but I haven't the time, neither do I think it best to encourage any such notions in the boy. You know how it is—'if you give an inch they'll take an ell.' He begged hard for us to dig up a larch this afternoon, but indulgence will spoil any child. If I had done that for him, why he would only have wanted more, and if he got too many such notions, why he is headstrong, and the first we should know he would be off like others we know of. No; the only way to get along with children is to be *strict*; no arguing with them, and no giving way to their foolish wants."

"Do you think it was indulgence that made George White go to New York? I don't know but what it might be, his mother was dreadful careful of him."

"I should like to know what 'tis makes boys leave their fathers' homes and farms and go off to the city, and barely get their board, if it isn't letting them have their will and way."

"I have no doubt that over indulgence begets self-will, and overcomes a child's sense of duty, so that restraint is thrown off, and parental obligation disregarded; but husband, I do believe one thing, and that is, if we wish Willey to love his home, we must make it happy; if we wish his warmest affections to cluster around this place,

we must make it attractive. You think the Norton boys are indulged too much, but this indulgence is nothing more than a desire on the parents' part, judiciously carried out, to make them useful and happy. And I believe they take the right course. No children love their home better than they do. Mrs. N. tells me that it is with the greatest reluctance that they leave home in the vacation, to visit their cousins in the city."

"Well, well, don't say any more, for I have as much as I can do to get through the day's work, and I for one want to sleep in the night! Mrs. Norton is welcome to her notions and I will have mine!"

While Mr. G. is wrapped in the "sweet sleep of the laboring man," and Mrs. G. is revolving in her own mind the many different plans which suggest themselves to a mother's ever watchful heart, for the good of her boy, let us take a peep at the character of both parents and child.

Had a stranger inquired of almost any one in N., "what sort of a man is Mr. Gove?" the answer would probably be to this effect: "Fine man, sir, upright, honest, and firm; *trifles* don't move him, sir." Granted—but let us see if there can be, with these good qualities, nothing wanting.

Mr. G. was stern; in his view, the "*smoothing over*" of an affair was never advisable. Billy, as a child, had much to contend with in the way of passion, pride and self-will; like almost all children occasional acts of thoughtlessness and hasty impulse led him into error and its painful consequences. Had his father been careful to "do justice to his better qualities, while at the same time he blamed and convinced him of his faults," all might have been well; but Mr. G. never met his errors in "love and conquered them by forgiveness." Unjust harshness actually confirmed him in error. Mr. G. was spoken of as a generous man, but to use the beautiful language of one departed, "There are those who are lavish in attention and presents to friends, but who never imagine that their own home circle has the first and strongest claim to kindness, whether of word or deed. Affections and thoughts lavished on comparative strangers, never radiate on home; but when given to home first, they shed light and kindness far and near." Mr. G. never won the heart of his child. How was it with the mother? She possessed the rare combination of "gentleness with firmness, submissiveness with dignity." Her anxious desire was to do justice to his better feelings, and while she wished to educate his mind, she was more anxious that his heart should be won and taught.

But little change, outwardly, was visible in the Gove family when William had reached his eighteenth year. The homestead remained the same—save some marks which "Time's effacing fingers" had not failed to make. The "ash tree," by the spring, was gone, and the maple "for the horse to stand under" had never been "set out."

One fine morning in May, William asked his father if he might have the sorrel horse to go to the village adjoining. Permission was given on condition that he would return before dinner. Dinner came, and with it came William.

"What has our William been doing?" exclaimed Mr. Gove, as he gave a hasty glance at the window. "Cutting a wagon load of withes!"

"I don't know, but I can't see very well without my glasses."

'Twas easy to see, however, that that hasty glance had ruffled the smooth current of his thoughts, for he at once knew that withes needed no roots. William took out the horse, wheeled the wagon into the shed, and entering the long kitchen, seated himself at the table. The mother with her quick perception failed not to understand why that shadow rested upon the father's brow. Hardly a word was spoken—Mr. G. upon leaving the table took up a newspaper, a thing which he rarely had time to do; it was evident to Billy, however, that he was not reading very intently, for the paper was upside down. When William left the house he went directly for the spade and hoe, and walking deliberately down the hill side, south of the house, commenced making holes twelve feet apart, where he had helped his father plow the day before. He had thus been engaged half an hour, when rising to wipe the heavy drops of moisture from his forehead, he saw his father looking earnestly at him.

"What are you doing, William?"

"I am fixing places to set out trees!"

"What kind of trees?"

"Peach and pear trees, sir."

"Where did you get them?"

"I bought them at a tree auction to-day."

"You did! Well, you can't set them here, sir."

"I can't—what's the reason?"

"There are reasons enough, though I'm under no obligation to tell children; yet I won't be particular this time. In the first place, I wish you to understand once for all, that you take one step too far when you buy trees without leave or license, and more than that proceed deliberately to put them on my best corn land. And now you can do what you please with the trees. You have taken far too much liberty. You shall never set them on my land."

Without one word, William shouldered his spade and walked to the house. His mother, who stood at the corner window, although she had heard no word spoken, understood the whole affair perfectly. She saw William shoulder the spade, and then her heart beat heavily, but quickly raising the corner of her apron, she wiped away the tears which were fast falling, and met her son with a smile.

"Well, mother, I've done," said he as he sunk down on the old kitchen chair, "I've done trying to be any thing here. He wont let me be any body!"

"My child, don't speak so disrespectfully of your father. He, Billy, that sounds dreadfully; never say that again, my son."

"I can't help it, mother, I shan't stay here. You know what I told you last week, mother, and to-day I have had something come across my feelings, harder to bear than all. When I was coming from the village, I met a man with a double wagon, and a beautiful larch tree in it. I was hoping to buy it, so I asked him where he got it, 'Squire Gove gave it to me,' he replied. O, mother, wasn't that too much? I asked him who took it up, and he said his Irishman, that he called Mike. I could have torn that tree in splinters, mother. I rode round by the grove, and sure enough 'twas gone, and the mossy seat all trampled and torn. Do you think after that I would

ask him to let me set out the trees? No, mother, if father can do without me, I can do without him. I shall go away as soon as you can get my things ready. Of course the folks will say—'What an ungrateful boy to leave his father alone,' but why can't father try to please me as well as others—as well as strangers? There are the Norton boys—if father had done one-quarter for me that their father has done for them, I should be very, very, happy. O, mother, don't feel so bad—you must not blame me. I know you are a real Christian, mother, but I an't like you—you overlook, and forgive everything. I am some like father; I wish I was just like you."

William expected his mother would entreat him to stay at home, but no, not one word did she say in favor of it. She knew these were little things to cause the boy to leave the home of his youth for a home among strangers, but she knew also that the joys and griefs at home are almost all made up of little, very little things.

We will hasten over the particulars of William's leaving home, and only say that his father's parting words were, "I can do without you as long as you can without me, William." In four weeks from this leave-taking, William was a sort of waiter on board a Mississippi steamboat.

Mr. Gove hired an extra hand;—many people shook their heads meaningly, and said it was a pity, a great pity, but nothing new or strange, for an only child to be spoiled by indulgence; but there, he was a pretty, bright boy, and they supposed it came hard to punish him, but, "Spare the rod and spoil the child," was scripture.

The summer was passed, the golden grain was garnered, and the rich fruits secured, when Mr. Gove, who had grown somewhat moody of late, called Mike to the back door, and giving him some directions, took his hat, and passing out the other door, joined him.

"Let me see, you have the spade and hoe. Well, now, come down with me to the side of the hill where the early corn was planted, and do you remember where the holes were, that William made last spring?"

"And sure 'tis not me that's afthur forgatting sich things, for didn't I put a flat stone by every hite of 'um; and didn't I in hoeing and harvest keep them from being shoved a bit? For do you mind, sir, I set a dale by the boy—he wouldn't hurta baste, sir, and his heart is as big as a whale."

"Well, well, that's enough, Mike. Now you bring all the trees you buried in the swamp, and set them out just as you did Norton's, and do you know which were the trees designed for the holes William had opened?"

"And faith I mind it well, for didn't I tie a string round 'um, and lay 'um jes so."

"Well, set them right, and when you have done them, call me from the house."

Mr. G. took the arm-chair, and moving it to the bed-room window, seemed lost in thought. Surely, he must be sick, for he never was known to sit down of a week-day except at meal times.

Two hours passed and Mike was passing the window, when he was thus accosted by Mr. G.: "Have you done, Mike?"

"Sure, sir, a pleasant job to me, I was lazy to quat it."

"Now take your spade and prepare a place by this window, where you see I've placed the stick.

for a larger tree. Now if you have it right, go over to Capt. Burns' and ask him if he will sell me that larch tree in the west corner of his birch lot. Tell him the price is no object, and be careful you don't break any of the small roots; be very careful, Mike."

"No fear o' that, sir."

"Stop, that is not all. When you come home, call at Smith's, and tell him I have concluded to let him have the land, and tell him to come over this afternoon and Squire Norton will be here to fix the writings. Tell all who inquire for me that I am sick."

Before night one-third of Mr. Gove's land was in Mr. Smith's possession, and the deeds on record. The larch seemed quite at home by the bed-room window.

And now, what strange spell was this upon Mr. Gove.

"O, there are moments in our life
When but a thought, a word, a look has power,
To wrest the cup of happiness aside
And stamp us wretched!"

The evening before, Mr. G. chanced to take up a school-book of William's, and on a blank leaf were written, in a neat school-boy hand, these simple lines:

"Tis the last blooming summer these eyes shall behold;
Long, long ere's another, this heart shall be cold:
For O, its warm feelings on earth have been chilled,
And I grieve not that shortly its pulse will be stilled."

Mr. G. dropped the book, and wandered he hardly knew whither, till he found himself in the swamp where William's trees were buried. What followed the reader already knows.

Mrs. G. had finished her day's work, and was seating herself in the little rocking chair, when Mr. G. called to her from the bed-room.

"Betsey, will you sit in here? I want you to write a letter to William to-night."

"To-night! Why it is after nine o'clock!"

"I know it, but I shall feel better if it is done to-night. I feel sick all over, and perhaps I am nervous."

"I will write what you wish me to, my dear husband."

"O, don't say so—but tell Billy I wish him to come home without delay; tell him for the love he bears his mother, and for the love I bear him, to come now. Say that my hand trembles so I can't write this, but I say it from my inmost heart."

Mrs. G., with an overflowing heart, quickly performed the delightful task.

"And now, Betsey, I will try to ask God to watch over that boy, and to soften my own proud heart."

"O! when the heart is full—when bitter thoughts
Come crowding thickly up for utterance,
And the poor common words of courtesy
Are such a very mockery—how much
The bursting heart may pour itself in prayer."

June, beautiful June, the "month of roses," found Mr. G. in that "old arm chair," by the bed-room window, but O, how changed!

"His hair was thin, and on his brow
A record of the cares of many a year,
Cares that were ended and forgotten now."

It was the last day of his earthly existence. The gentle breeze as it swept through the light foliage of that beautiful larch caused him to open those eyes so soon to be closed for ever—and as they met for the last time on earth those of his

own Billy, upon whose arm his head rested, he whispered, "I die happy now," and the scene of life had closed.

M. F. D.

Brentwood, N. H.

DELAYS.

BY ROBERT SOUTHWELL—1595.

[We copy the following verses from an old English book, and believe their promptings just as good as though they were not two hundred and fifty-seven years old!]

Shun delays, they breed remorse;
Take thy time, while time is lent thee;
Creeping snails have weakest force;
Fly their fault lest thou repeat thee;
Good is best when sooner wrought,
Ling'ring labors come to nought.

Holst up sail while gale doth last,
Tide and wind stay no man's pleasure;
Seek not time, when time is past,
Sober speed is wisdom's leisure.
After wits are dearly bought,
Let thy fore-wit guide thy thought.

Time wears all his locks behind;
Take thou hold upon his forehead;
When he flies, he turns no more,
And behind his scalp is naked.
Works adjourned have many stays;
Long demurs breed new delays.

PROPER SIZE FOR FARMS.

No error is more universal than for Tyros in farming operations to suppose, that the business of farming may be pursued without means, and that first crops may be obtained from the soil without any additions. Nor is this error confined to the uninitiated only—for many farmers continue to plod on, trusting simply to the waste materials of the farm for manures, and raising small crops at full expenditure for labor, and no expenditure for manure, and much less amount of labor as compared with the increased amount of crop. For these reasons many farmers fail of success, and they are generally constrained to follow this practice, from having farms of too great a size, and insufficient cash capital for their proper management. Current cash means, equal to twenty-five dollars per acre for the amount of land in use, is absolutely necessary for success, and even this sum is the very smallest amount that can be used with profit. With such an amount the farmer may buy his fertilizing materials at proper seasons of the year, have them properly prepared, and use them in the most economical manner. He may then have every acre of his farm in condition to produce a maximum amount of profit. When labor is misapplied, it is lost forever, but if an excess of manure should be used, it still remains, if properly prepared before use, for future crops, and with many amendments it appears to be nearly or quite impossible to use an excess quantity. As an instance, suppose a crop of corn to be raised with ordinary manuring, the labor of culture twelve dollars per acre, and the crop resulting forty bushels of shelled corn. Let us suppose a similar acre, to which thirty dollars' worth of manure is applied, thirteen dollars labor, and the product a hundred bushels of shelled corn—it will readily be seen, counting on the corn alone, the first crop, the corn being worth fifty cents per bushel, makes a loss to the farmer of four dollars; and probably leaves his land impoverished, while the last makes a gain of seven dollars in corn, leaving the land improved, certainly to the value of half the cost of manure applied, and the next year in the succession of

crops, the ratio of profit will be materially increased in favor of the more highly manured land. With many of the heavier crops the labor constitutes two-thirds of their cost, and, therefore, if the crops can be increased by the application of manure without material extra labor, such excess of crop is at much less cost, and yields much larger profit.—*Working Farmer.*

VERMONT STATE FAIR.

The great Farmers' Festival for 1852, in the State of Vermont, took place at *Rutland* on the first, second and third days of September. A few days previously to the fair there had been a copious rain, which washed up the trees and grass, and giving all vegetation a fresh and lively appearance, and at the same time moistening the parched earth so as to make it pleasant under the feet.

Addresses were delivered on the first day, by Wm. S. KING, Esq., Editor of the *Journal of Agriculture*, in which he spoke eloquently of the importance of a more systematic mode of husbandry, and enforced his text by many well drawn illustrations;—and on the second day, by Mr. SEWARD, a member of Congress from New York.

The arrangements for the Addresses, the exhibition of the stock, implements, floral exhibition, domestic manufactures, for refreshments and for witnessing the movements of the horses, were good. Some 30 acres were enclosed by a high fence, with entrance gates at convenient points; in this enclosure was a large grove of noble rock maples, in the midst of which the cattle were quietly reposing, and in which pens for sheep and swine, and the Mechanic's and Floral Halls were erected. Water was freely introduced, provent was plenty, and the green turf or the clean straw forming a couch, there was as pleasant a scene of quiet and contentment as one will seldom find among the ruminators. Within this delightful shade there was also a higher order of enjoyment; men, women and children, all in holiday attire, had released themselves from the busy cares of life, and were reaping a rich harvest of pleasure in the attractions of this festival. Here, a group of stalwart men, sons of the mountains, gravely discussed the surpassing merits of their favorite breeds of sheep, swine and cattle, or boldly pronounced on the elegant action and high mettle of their rampant steeds; there, in floral hall, ladies examine articles of fine texture and skillful workmanship, wrought with exceeding patience and care, and proving that the graces are not strangers in the household where utility seems to be the presiding genius; and there, in that sequestered spot, where the breeze plays with dark curls and the sunlight touches fitfully the glowing cheek of a comely maiden and the thoughtful brow of him who sits beside her—there is a delightful part of the ceremonies "not mentioned in the bills." But we will not obtrude there. May the pure air

of heaven chant anthems over their heads in the tops of the old maples, and the flutterings of their leaves be in consonance with the hearts that flutter beneath them. We pass on.

Fifteen hundred persons could be comfortably accommodated on the seats erected for witnessing the movements of the horses, and from thence often proceeded the clapping of hands, waving of handkerchiefs and bursts of applause for some favorite charger, as they once rose in the Roman amphitheatres, but on very different occasions. In short, the spot was happily selected and the arrangements were judicious.

This fair was the second which has been held as a State Fair, and of course brought together much that might without exaggeration be called excellent. The horses, taken as a whole, cannot, we confidently believe, be equalled in the union. Not that as many horses cannot be selected in any other State, possessing as much speed, or as much beauty, or as much power as these, as separate and distinct qualities; but that they cannot be found combining all these qualities, and thus making the perfect animal. A horse may have too much muscle, or too much action, as well as not enough. But here we saw such a nice adjustment of the requisite powers, of shape, spirit and action, as left nothing to be added, and nothing to be taken away without detriment to the whole.

We have looked with some care at the blood horses at the South, as we have more than once at the noble specimens reared on the hills of Vermont. These breeds have the three great requisites desired in the horse—endurance, speed and docility. The blood horses of the South have the speed, and the Vermonters that hardihood and power of endurance which makes them eminently calculated for the practical purposes for which they are wanted. When these qualities are combined, they will produce an animal which shall with proper training win a three mile heat on any course. The high blood, neat and nervous, but well turned limb, of the Southern horse, combined with the round, muscular, and deep-ribbed trunk of the Vermonter, will make up an animal unsurpassed in the world. There is a little jealousy, we noticed, among the farmers of Vermont, in relation to their horses; but we think it unnecessary, and in the end may be injurious to their common interest. The Black Hawk and Morgan, from their configuration, action and spirit, are of the same blood, and only exhibit different qualities from the influences growing out of different keeping and training.

Then there were the *French Merino Sheep*, very properly attracting attention. For some cause or other, Nature found it inconvenient to increase the body of the animal beyond a certain size, while at the same time she wanted a great deal of wool. So she has run the fleece down to the very hoofs.

over the forehead and about the eyes; but not content with this, she has formed large folds of skin about the neck of the animal and covered them with thick coats of the finest grade of wool.—Messrs. SHARPE and TAYLOR, of Lockport, N. Y., purchased two bucks of S. W. JEWETT, of Middlebury, at \$200 each, one of which gave a fleece of 21 pounds last spring. The Messrs. BINGHAM and Mr. CAMPBELL also had sheep of this breed which were attracting much attention.

A pair of fat oxen, of Williston, from HENRY MILLER, were unusually fine. Although but four years old, their weight was estimated by several farmers to come nearly up to six thousand pounds. One of these was a half blood Hereford, and the other a half blood Durham. A two year old Devon bull, owned by E. L. PEASE, of Landgrove, was a remarkably fine animal, as was one owned by L. WARREN, of Montpelier, two years old, and weighing 1588 pounds. A Devon heifer belonging to Wm. R. SANFORD, of Orwell, with her calf, seemed to be, as the novelists say, “the cynosure of all eyes”—and to our own eyes, she seemed so near perfection as to puzzle us to add an improving point. Then there was a pure bred Hereford cow, the property of A. L. BRIGHAM, and said to possess extraordinary merits. The show of cattle was neither large or remarkable; it was probably nothing like the exhibition the Vermonters are able to make.

Of *Swine* there were but few, but some of them very fine,—of the Suffolk blood.

Of *Poultry*, we will say nothing, but invite our good friends to visit the county shows of the Old Bay State, and *hear our cocks crow!*

The show of *Fruits, Vegetables and Flowers* was very limited. More attention will undoubtedly be given to these useful as well as ornamental parts of their fair hereafter.

There was a fine display of household articles and agricultural implements, castings, furniture, musical instruments, &c., &c.; but which we have neither time or space to enumerate now. The exhibition of paintings, tapestry, needle work, &c., &c., afforded proof of taste and skill on the part of the makers, but will all be improved at their next Fair.

We are obliged to be brief in our remarks, but prefer being so to postponing the subject to another paper. Space must be found, however, for personal acknowledgments—first to the liberal policy of those in charge of the several roads, who made a “clear track” for us wherever inclination prompted us to go. This is the true policy of all the railroads. The great gatherings of the people, agricultural, religious and political, are all heralded to the world through the press, and at each of them proprietors are subjected to heavy expenses in obtaining the reports of their proceedings. It is as sound policy for those who control the roads to carry persons at reduced prices on those occa-

sions, as it is for the government to reduce the price of postage; the net income will be far greater, without much increase in expenditure.

The especial acknowledgments of the Editor and of Mr. RAYNOLDS, one of the proprietors of this paper, are due to the officers of the society, and to Mr. JAMES BARRETT, and his interesting family, at Rutland, for every accommodation and attention one feels the importance of after a weary travel.

At the *Island House*, at Bellows Falls, conducted by C. R. WHITE, Esq., we found ourselves in a kind of fairy land. In point of excellence at the table, in the attention and quiet deportment of the servants, the general convenience, neatness and order of the house, it is equal to any other in the country. In beauty and boldness of scenery, it surpasses most of the attractive spots in New England. We commend this beautiful spot and the accomplished landlord of the Island House to those seeking health or amusement in rural scenes.

Returning by way of Brattleboro', we passed the night at the *Revere House*, conducted by JAMES FRISK, Esq., and there found the same attention, quiet, neatness, and order prevailing, as above. Both of these places are emphatically the *Home of the Traveller*. Snugly seated among the everlasting hills, their sides laved by the waters of the Connecticut, and refreshed by the thousand silver streams dancing down their sides, Brattleboro' is one of the most attractive spots in New England. This charming place, and Bellows Falls above, cannot be too strongly recommended to persons from the city in search of recreation and health.

On the whole, the Vermonters made a fine display of the good things of their noble State, and of their kindness and hospitality, and their *Second Annual Fair* will be remembered by thousands with feelings of much gratification.

THE BEANS.

MR. EDITOR:—Seeing a short paragraph in your paper of Thursday, in regard to “Eccentric Beans,” I wish to add a few words in respect to the same.

Last year I planted about two hundred hills of horticultural beans, which are thought to be the best running pole beans; they came up very well, but instead of following the poles, as is customary, they immediately turned into bush beans, and yielded quite bountifully. This is the first year that such a thing ever happened in all my experience of farming; and I believe that, judging from the reports of other, your statement is entirely correct. I think the beans are forming a private party, and intend obeying their own master rather than the will of the poles.

AN OLD WATERTOWN FARMER.

—*Boston Journal*.

☞ To preserve meadows in their productiveness, it is necessary to harrow them every second autumn, apply top dressings, and roll them.

ARABIAN HORSE "TARTAR."

The above cut represents "Tartar," one of three young entire horses, of Arabian blood, bred by ASA PINGREE, Esq., of Topsfield, and now in possession of J. S. LEAVITT, Esq., of Salem, Mass. He was six years old in the spring of 1852, and was sired by the imported full blood Arabian horse "Imaum." Tartar stands fifteen and a fourth hands high, weighs nine hundred pounds, and is of a dark grey color, with dark mane and tail.

The engraving above pretty well shows the configuration of "Tartar," but cannot represent the agile action, flashing eye and cat-like nimbleness of all his movements. It shows, however, the beautiful Arabian head and finely-set-on neck; his ample, muscular quarters; his flat legs, rather short from the knees downwards; and his long and elastic pastern. All his motions are light and exceedingly graceful, and his temperament so docile that a child may handle him.

The owner of "Tartar" has also two other horses of the same blood. The first, "Sultan," was seven years old in May, 1852, sired by Imaum, and out of a full blood English mare. Stands fifteen hands high, weighs about nine hundred and fifty pounds, and is of a light grey, or rather light chestnut, dapple color—fine figure and action. The second, "Prince," was seven years old in August, 1852, sired by Imaum, and out of a Vermont Morgan

mare; stands fourteen and a half hands high, weighs nine hundred and fifty pounds, and of a granite or stone grey color, which was the color of the sire.

The Horse Imaum, sire of the three horses above mentioned, is the horse referred to in the *New England Farmer*, for 1849, page 355, as follows:—

In 1842, a fine Arabian horse, of pure blood, was presented by the sultan of Muscat to David Pingree, Esq., of Salem, as a mark of distinction and particular regard, selected as one of the best from a stud of one hundred horses. Hon. Richard P. Waters, late United States consul at Zanzibar, who shipped said horse by order of his highness the sultan, remarks as follows of this race:—

"It is well known that all the superior properties of the Barbary, the Andalusian, and the English blood horse are derived from the Arabian. This blood of horses have greater powers of endurance, better wind, or *bottom*, as it is technically called, than any other in the world—beside more ease of motion, activity, and grace of action.

"It is unnecessary to recommend him to those who are fond of fine horses, as highly worthy of their attention. RICHARD P. WATERS."

It is undoubtedly the combination of different and excellent qualities which makes up the best horse. The Arabian possesses remarkable powers of speed, and it is said of endurance, too—but we cannot doubt that the Arabian, mingled with the best of

the English road horses, has produced a stock better than either of the originals for the practical uses which we make of them.

The introduction of this splendid animal into our columns affords us an opportunity to refer to an anecdote or two, showing the strong love which the Arabs have for their noble steeds. They have exhausted all the wealth of their fine language and rich imaginations in descriptions of the beauty, spirit and pride of the noble animal. The mare of Shedad, called Jirwet, is thus mentioned:—

Shedad's mare was called Jirwet, whose like was unknown. Kings negotiated with him for her, but he would not part with her, and would accept no offer or bribe for her; and thus he used to talk of her in his verses:—"Seek not to purchase my horse, for Jirwet is not to be bought or borrowed. I am a strong castle on her back; and in her bound are glory and greatness. I would not part with her were strings of camels to come to me, with their drivers following them. She flies with the wind without wings, and tears up the waste and the desert. I will keep her for the day of calamities, and she will rescue me when the battle dust rises."

What energy and power there is in the following description:—

"But at the clash of arms, his ears afar
Drinks the deep sound and vibrates to the war;
Flames from each nostril roll in gathered stream;
His quivering limbs with restless motion gleam;
O'er his right shoulder, floating full and fair,
Sweeps his thick mane and spreads his pomp of hair;
Swift works his double spine; and earth around
Rings to the solid hoof that wears the ground."

The Bible has several passages of surpassing grandeur in relation to the horse, showing that his speed and power were appreciated in those remote times. A description bordering upon sublimity may be found in Job, chapter 39, to which the reader is referred.

HINTS FOR SEPTEMBER.

September is a sort of preparatory month for bringing to a close the operations of summer and commencing on autumn. The farmer will therefore find a benefit in having his eyes open to both ends of the season. If the drought has left you anything of the herbage kind in the shape of second growth, or rowen, a careful collection and saving of it will demand your attention, and as the hay crop was a light one, anything that can be saved for that purpose will come into good service next winter.

The root crops require some attention in the way of being freed from weeds, and thinning out; *provided, nevertheless*, the grasshoppers have not already done the latter for you. They will now begin to swell out their roots and increase in size in this respect, until cold weather checks their growth.

If you have not already sowed your winter wheat, and the drought has probably kept you back, it would be well to get it in now as soon as possible. Don't be frightened because the drought last fall, and the severe winter past, destroyed so

many fields. Such a concurrence of seasons may not happen again for many years.

There have been a good many thousand bushels of first-rate winter wheat raised in Maine this year; besides, the weevil has done but very little damage indeed to spring wheat. So thank God; take courage and put in the wheat in faith and with a liberal hand.

Early fruit requires your care; whatever of early apples cannot be sold in the market, should be given to your hogs or to your cattle, or pared and dried, and not be suffered to rot and go to waste.

Look over your flock of sheep and cull out those which will be too old to winter, and see, if they are not now fit for the butcher, that they be put in a situation where they will become so before housing time. Start your hogs to fattening, and if you propose to fatten a cow, or steer, for your own home consumption, it would be well now to give them a little extra feed.

If you have a muck mine, and have not already improved the late dry weather in getting into the "diggings," seize the first opportunity to open it for the benefit of your compost heap.

If rightly managed it will make your crops laugh next year, and laughing crops make comfortable people.

Beans, when the leaves have begun to turn yellow, and the bean is in a dough state, may now be gathered and stacked between two stakes, where they will ripen and dry well. You should be careful not let them touch the ground at the bottom, as they will be likely to rot if they do.—*Maine Farmer.*

BOB'S NOTION OF BOOK FARMING.

Bob, the farmer's son, thus expresses himself of an improved system of farming, in the *Indiana Farmer*:

EDITORS FARMER:—I have only to say to you that I wish you would keep your agricultural paper to yourselves, and away from our house.—Since the old man has been taking it, there is "no rest for the wicked," certain. He keeps us hauling *muck* (as he calls it,) manure, old ashes, and even makes us clean out the pig pen and put the filth on the fields. Formerly there was some mercy shown the horses, for we plowed only three inches deep, but now, nothing less than ten inches will do, and the corn ground is to be plowed below that with a new plow he has just bought.

The next thing, I presume, will be to take the bottom out of the well! We used to take the *Palladium*, and he would suck down the politics contained in it as gospel truths, and had plenty of time to spend half a day, and time to talk about who should be elected, and who should not. But he don't read that paper now, and he is as anxious to get the *Farmer*, as he was formerly to have election day come round. He is all the time talking about new "fertilizers," &c. He don't only talk either, but he makes us boys hoe it from morning till night. We have had to tear down all the fences, and re-set them, and he has got the old lady in the notion of white-washing the garden fence. What foolishness! and the plague of it is, we boys will have it to do—just wasting the time we might spend in fishing. So keep your paper to yourselves, and we will have some rest again.

Bob.

For the New England Farmer.

A NEW LAMP.

DR. SIEDHOF'S IMPROVEMENT—PATENTED JULY 27, 1852.

Not long ago, an extract was given in this valuable paper from a private letter to its editor, SIMON BROWN, Esq., concerning a new lamp, which, it is hoped, will supersede the use of the camphene lamps, an article so dangerous that the laws of the State should forbid it. In attempting to give a brief account of the properties and peculiarities of my lamp, I must premise that I am a philologist and teacher. As such I was a professor of a college in Germany, my native country, and, after my arrival here, established a boarding-school for boys at Newton Centre, which was transferred to Lancaster, Mass., in the spring of last year. From a few articles of mine, printed in the *Farmer*, it will have been observed, that I am also very fond of the sciences, especially of natural history, chemistry and natural philosophy, and, having acquired some little skill in mechanical operations, such as turning in wood and metal, grinding optical glasses, etc., I can be the more useful to my pupils in occupying their minds in some of the hours of leisure in an agreeable manner.

About eight years ago, I directed my attention to the construction of lamps. As those lamps, considered then the best, were either too expensive and liable to getting easily out of repair, or consumed too much oil, I proposed to construct a lamp free from the above objections and uniting the advantages of them all. As a German philologist, I commenced my operations at the root *i. e.* I studied the history of the lamps, their different arrangements in different times, and their gradual improvements. Although unsuccessful in a great number of experiments, yet I was not discouraged, nor lost ever sight of my object in view. At length, about a year ago, I accomplished what I wished, but a calamity in my domestic life prevented me from taking any actual step.

Those a little more acquainted with lamps than their common and daily use requires, know well enough that the *first and most important requisite of a good lamp is a constant, never lowering level of the oil.* A changeable level makes the light constantly decreasing, and impairs not only the eyesight, but tends to wasting the oil in such a degree as it will hardly seem credible to those not practised in the use of the *Photometer*. The only lamp, in which the level of the oil remains constant, is the *Carcel* lamp. Still it is too expensive for general use, and gets so easily out of repair, that even such as can, without difficulty, afford the money, become soon displeased with it. The so-called *Liverpool* lamp approaches a constant level, but it has so many inconveniences, that its use is limited. The general way to diminish the disadvantage arising from a changeable level, is to enlarge the surface of the oil. This, however, is not avoiding it, nor does it exclude or obviate other defects.

After my lamp was ready for use, I did, on purpose, not make any comparative experiments with it; for as I had labored so many years for the *thing itself*, not for pecuniary profits, I wished to remain unprejudiced, awaiting impartially the results from experiments to be made by others. So I invited, in the middle of January last, three gentlemen of this place, viz.: Rev. Mr. BARTOL, Rev.

Mr. EDWARDS and Dr. LINCOLN, to spend two successive evenings with me and to experiment with the lamp. Those gentlemen were kind enough to comply with my request, and to conduct the experiments during ten hours and five minutes. My lamp was compared with a common glass lamp with two solid wicks. Both were filled with equal quantities (4 ounces each) of the *poorest oil* we could get. It cost 75 cents a gallon. The light of both was measured by a *Photometer* from hour to hour. The data obtained in this way, were the basis of the conclusive comparison and calculation.

Not being able to enter here into a detailed account of the lamp, I confine myself to the description of the results as given by me in an article on the lamp, which I wrote for a New York paper, at the request of the editors.

1. The construction of the lamp, being based on the application of two philosophical principles, has *no machinery about it.* It is as easily managed as a common glass lamp, and cannot get out of repair, except by breaking it.

2. *Any sort of wick* can be used in it, viz.: the common round solid, the flat or band (*Altstroemer's*), the hollow round (*Argand's*), and the semi-circular (*Gohl's*) wick. The lamp, of course, must be arranged for any of those forms of the wick.

3. The lamp which was used for the experiments, consumes, *in a given time*, exactly as much oil as a common glass lamp, but

4. It produces 2-3 as much light as the glass lamp.

5. The light of the glass lamp is constantly decreasing, so that after the fourth hour, the level of the oil has to be raised by pouring water into it, because it will not burn any more. The light of my lamp remains unchanged from the beginning to the last drop of oil contained in it. How beneficial this is to the preservation of the eyesight, everybody will admit, nothing being more destructive and injurious to the eyes than that imperceptible, gradual diminution of the light in common lamps. Beside, my lamp needs no trimming for five or six hours.

6. The level of the oil remaining always at the base of the flame, the *poorest oil* can be used in it as advantageously as the best. It is evident from the above, that the capillary attraction of the wick is entirely dispensed with, and that it consequently is unimportant whether the wick becomes clogged or not.

7. The lamp can be arranged for chimney glasses and globes just as well as not.

8. Any kind of shade can be used. For shades, Hinley's blue square shade deserves the preference.

9. The lamp can be made with one, two, etc., or six burners.

10. Its external appearance is very handsome. Still it can be made, I think, for 75 cents or a dollar a piece.

I wish very much to have it distinctly understood, that the above statements are *literally true.* Our age is the age of improvement, but also the age of show. *Appearances* go farther than *realities.* I hope that the names of the gentlemen who made the experiments, and who permitted me to refer to them whenever I should think it advisable, as well as the references on my prospectus, will warrant my moral, scientific and literary character.

Being, as yet, undecided as to the course I shall have to pursue in introducing the lamp to the public, I shall, with pleasure, attend to inquiries directed to Dr. Charles Siedhof, Lancaster, Mass.

CHARLES SIEDHOF.

For the New England Farmer.

THE NORTHERN SPY APPLE.

MR. EDITOR:—Cultivators need not be told that this apple is one of the best and most beautiful of spring apples; but they probably have yet to learn whether it will do well in New England. At present there is a diversity of opinion as to its success here. Some cultivators are ready to condemn it, others to give it a longer trial, and a few think its success is certain. But I see little said of it in the agricultural journals. Why this dearth of facts? Has any one yet fruited it on the young and vigorous tree? If so, was the fruit fair, and what was the soil and its position? I think if you or some of your correspondents would answer these queries, your readers would be grateful.

For freshness and tenderness in the spring, this apple is unequalled, though it will not keep so long as the Roxbury Russet, and cannot therefore supplant it. It is a fruit which has excited more interest than any other for the past few years, and so much has it been admired, that any new facts concerning its culture among us will be seized with avidity, though perhaps with some fear of disappointment.

Roxbury, Aug., 1852.

L.

REMARKS.—We have no apple trees of the kind mentioned in bearing yet, but know where there are some; will see them and collect the facts.—There is plenty of knowledge on this subject among our intelligent correspondents, and some of them will undoubtedly communicate it for the public benefit.

SUPERPHOSPHATE OF LIME.

In your May number, SILAS H. MEACHAM inquires where the superphosphate of lime of good quality may be obtained, and what is the price. You say, in answer, "It is being manufactured by the New Jersey Zinc Co., and is for sale in New York city at 24 cents per pound," (price of guano.) This manure may be manufactured by Mr. Meacham, or any other expert farmer, for less than one cent per pound, and the certainty of having a pure article and saving his 1½ cents to expend in agricultural works.

The plan I adopt to dissolve bones, is to have them ground as fine as I can, put them into a wooden vessel, pour on as much water as will wet them, generally till it rises to the upper surface; then pour in sulphuric acid 40 lbs. to 100 of bones; stir them frequently, until dissolved. After the bones are dissolved, I mix them with as much earth as will enable me to spread it over the field. The cost will be—

For Bones,	100 lbs., at 1 cent per lb.,	\$1 00
Sulphuric acid,	40 lbs., at 2½ cts. per lb.,	1 00
Water,	80 lbs.,	

And we have 320 lbs. of the manure for... \$2 00

and I have not much doubt a better article than the one made by the Zinc Company.

Last year I raised some mangel wurzels, and

manured some of them with this manure put in the bottom of the drills, and they were better than where I put barn-yard manure. The above amount of this manure is sufficient for an acre of wheat, which it will improve to the satisfaction of the farmer. The timothy after my wheat thus dressed was the best I ever cut; I think it paid four or five times the cost of the manure. There is no manure made that is so cheap as this superphosphate of lime.—S. G.—London Britain, Pa.

We have often recommended our readers to preserve bones, and convert them into superphosphate of lime; but, as many farmers have no bone mill in their neighborhood, and getting sulphuric acid is somewhat troublesome, it would be a great advantage to have a good article that could be purchased ready for use at a reasonable price—two and a half cents per pound we think an exorbitant one; and, as it is manufactured from a mineral phosphate of lime, and contains no organic matter, the bone-made superphosphate would be a superior article for wheat and other grain crops. It is said, however, that the mineral contains 90 per cent. of bone-earth phosphate, and as bones contain but 45 per cent., the mineral-made superphosphate of lime will be the best article for mangel wurzel, beets, ruta bagas, turnips, and all crops which are particularly benefited by phosphate of lime.

The method of dissolving bones as recommended by our correspondent, is a good one. It is preferable to mix the water with the bones previous to adding the acid, than to mix it with the acid before applying it to the bones.—Genesee Farmer.

AGRICULTURE IN FRANCE.

A letter writer for the *Republic* says:—"A trip of six hundred and fifty miles, from the northern to the southern extremity of France, justifies me in the expression of my opinion that God's sun does not shed its rays on so fair a land, or one so thoroughly cultivated. The whole country is literally a garden. Every square foot, from the mountain-top to the lowest ravine, is made to produce something, if it be susceptible of it. Their mode of planting or sowing their crops, whether on plain or hill-side, produces the finest effect on the appearance of the landscape; the place allotted for each crop is laid out in squares or parallelograms with mathematical precision, and, whether large or small, the best garden could not be divided with greater accuracy. As there are no fences or hedges, and as the different crops are in various stages of maturity, you can imagine the variety of hues that meets the eye, and the magnificence of the panorama that stretches out in every direction as far as the vision can penetrate. I am sorry to add in this connection, that seven-eighths of the agricultural labor is performed by females, while two or three hundred thousand stalwart men in uniform are idling away their time in the barracks of the cities and villages. In the absence of fences, cattle, secured by ropes, are driven about their pasturage by females; and sheep are confined within the required limits by boys, assisted by a shepherd's dog. Speaking of cattle, reminds me that, notwithstanding fresh pork is abundant enough in market, both in England and France, I have not seen a live porker in either country."

For the New England Farmer.

CATERPILLARS—RASPBERRIES—BOB-O-LINKS.

MR. BROWN:—Not content with receiving weekly an amount of information equaling my subscription in value, I claim a Yankee's privilege of asking questions, and rely upon the patience of an agricultural editor for satisfactory replies.

1. I wish to know the best method of freeing our trees from the ravages of the web-worm or summer caterpillar. For two seasons I have attempted their extermination, and were it not that I see nearly every orchard in this vicinity covered with their unsightly web, I should be ashamed to acknowledge my success has been rather limited. They are easily destroyed on small trees if taken when they first make their appearance, but they are frequently on the extremities of the branches of large trees where they cannot be reached, and coming as the first of them do in the middle of "haying," it is no small matter to watch them in an extensive orchard.

They commenced operations this year about the middle of July, and have continued to come in fresh swarms until the present time, attacking all kinds of fruit trees, except the peach and plum, and extending their depredations to most forest trees and ornamental shrubs. I have tried various methods of destroying them, and among others, burning with strips of birch bark, but they will "stand fire like a salamander," seem to work under water nearly as well as in air, and in fact, nothing but crushing appears to be effectual, and they are so scattered among the leaves, that great care is requisite to get them all in that way.

The only time at which I have been able to find them collected, is in the middle of a warm day, but I will not undertake to describe their habits, as I hope to have it more correctly and fully from you or Dr. Harris. (a.)

2. Where can Dr. Harris' Work on Insects be obtained, and what is the price of it? (b.)

3. What season is most favorable for transferring the native Black Raspberry from the field to the garden? (c.)

4. You remark in a late Farmer that the male Bob-o-link exchanges his black and white coat for a brown one, and I would like to know if there is good evidence of this, or whether it is merely derived from the fact that none but brown ones are seen after a certain period? (d.)

W. F. B.
Ashfield, Aug. 20.

REMARKS.—(a.) Our friend seems to be pretty well "posted up" on summer caterpillars already. Dr. HARRIS gives an account of them on page 254 of his work on insects, but which is too long to copy here. He says, "So soon as the webs begin to appear on the extremities of the branches, they should be stripped off, with the few leaves which they cover, and the caterpillars contained therein, at one grasp, and should be crushed under foot." The spiral brush attached to a pole, and a large stock of patience, will work great destruction among them in ten hours. But you have an "extensive orchard." How many would be happy to have you transfer it to them, together with the necessity of keeping off the web worms. Well, it

is a tax to keep them off to which many of your neighbors are not subjected. Our prescription is, patience and the brush!

(b.) Dr. HARRIS' Work on Insects Injurious to Vegetation is out of print. In a note he informs us that he is busily engaged in preparing a new edition, which will be issued in the course of the coming winter.

(c.) The black raspberry (thimbleberry?) is transplanted successfully in the autumn after the leaves are fallen, and in the spring. There is no difficulty in cultivating them, as they are hardy and only need common care. They are productive and wholesome, and ought to be in every garden.

(d.) We have great confidence in the books—they are (the good ones) but the recorded experience of those who are the closest observers, and who take the most interest in the subject they write upon. Speaking of the bob-o-link, Nuttall says, "they appear sometimes inclined to have a second brood, for which preparation is made while they are yet engaged in rearing the first; but the male generally loses his musical talent about the end of the first week in July; from which time, his nuptial or pied dress begins gradually to be laid aside for the humble garb of the female. The whole, both old and young, then appear in the same songless livery, uttering only a *chink* of alarm when surprised in feeding on the grass seeds, or the crops of grain which still remain abroad. When the voice of the bob-o-link begins to fail, with the progress of the exhausting moult, he flits over the fields in a restless manner, and merely utters a broken 'bob'lee, 'bob'lee, or with his songless mate, at length, a 'weet, 'weet, o'leet, o'leet, and a noisy and disagreeable cackling chirp." This writer made it a business of life to observe the habits of birds.

While the plumage of the male is undergoing this change he is shy and retiring, and soon after it is completed both sexes begin to assemble in considerable numbers, and may be seen about the cornfields, or in the pastures and sometimes alighting upon the fences. How long they continue in these habits or at what particular time they leave we are not able to state. But it is certain that no bird is seen during the time they remain, with the gay nuptial dress, either in the flock or separately, and all use the same plaintive note, *chink, chink*. In New England, we believe, they never collect in large numbers, but coming together from a few neighboring fields and meadows, pass the time as mentioned above. But after leaving New England they congregate in large flocks and travel together, visiting the margins of the rivers and feeding on the wild oats and other seeds. The shores of the Delaware, Potomac and other rivers south are thronged with them, where the gunners annually kill thousands. Those who

escape pass down south and are known as rice birds, feeding upon the rice fields of that region. They are all, however, of one plumage.

They become so fat and plump as scarcely to be able to fly; they are then tender, sweet and more delicious than any other bird we ever tasted, better even than the far-famed ortolan.

For the New England Farmer.

A GOOD CROP OF RYE.

On the town farm in Danvers, under the care of Mr. ADINO PAGE, master of the house, has been raised the present season four acres of winter rye, which yielded 168 bushels, weighing on an average 58 pounds to the bushel, of as plump and fair quality as any other grain of the kind I have seen. I speak of this crop, because I think it a very good one; and because it was raised in the ordinary course of cultivation, without any extra effort or expense. Having seen the field several times, I state such facts relating to it as have come within my own observation.

On a part of this land, rye was raised the year previous. The soil is gravelly and light,—bordering on a peat-meadow. The rock in this vicinity is sienite. It has been the practice, on this farm, for several years, to plow with a team of four oxen, as deep as practicable; and to dress liberally with manure from the hog-yard. No labor is spared in applying the manure, or in pulverizing the soil. The *cut and cover system* is not here introduced—certainly not since Mr. Page has had charge of the labor; for he has muscle himself, and he expects others to apply theirs. These facts are stated as explanatory of the crop grown. I know that others have claimed to have grown more than 40 bushels of rye to an acre, with extraordinary advantages of commanding sea-manure; but I have not seen four acres together superior to that grown by Mr. Page. Mr. Page now has a crop of corn standing in front of the almshouse, near the railroad—which will compare well with any other crop that I have seen the present season. I speak of these crops that the attention of the curious may be turned towards them, because there is so much *humbugging* in the accounts given of some of the extraordinary crops reported, that it is not easy to know, what is worthy to be credited.

I mention them also to show, that very good crops can be grown, where the land itself is very poor—by proper care in cultivation. Perhaps there is no farm in Danvers, that was more completely run out, than was this town farm 25 years ago. There is no farm now, which yields better crops of grain, than does this Poor Farm. P.

Danvers, Aug. 26, 1852.

For the New England Farmer.

THE PEACH TREE.

MR. BROWN:—In reading communications from several individuals in relation to the failure in the peach crop this season, and the cause of the trees having so sickly an appearance the first part of the season, I am of the opinion that it was not altogether the severity of the cold that affected them most, but the load of fruit, which the trees were permitted to sustain (if they did not break

down) which has injured them most. I tied up many of mine with ropes; others, I picked off half the amount of fruit when partly grown, and wherever this was done my trees look healthy and are well filled with fruit at the present time. I am of the opinion that the first freezing weather we had last fall injured the peach buds more before the leaves fell from the trees than the cold winter. I have cultivated the peach more than thirty years, and my seedlings have been sturdy and constant bearers, while my inoculated fruit has failed one year during all that time. I would recommend for all to obtain the lemon melocoton seedling; it is of good size, a constant bearer, they ripen gradually, and last longer than any other variety.

Grafton, Aug. 26, 1852. J. H. HAMMOND.

MASS. STATE BOARD OF AGRICULTURE.

A special meeting of the Board was called on the 7th of September, to fill the office of Secretary, made vacant by the non-acceptance of that post by Dr. HITCHCOCK. The Board met at the State House, and in the absence of His Excellency the Governor, was called to order by the Secretary.—His Honor, H. W. CUSHMAN, the Lieut. Governor, was then elected President for the day. The proceedings of the last meeting were read.

Present,—Of the *ex-officio* members, HENRY W. CUSHMAN and AMASA WALKER.

Of the members appointed by the Governor and Council, EDWARD HITCHCOCK and MARSHALL P. WILDER.

From the State Society, JOHN C. GRAY.

From Berkshire County.....STEPHEN REED.
 " Essex County.....JOHN W. PROCTOR.
 " Franklin County.....JAMES S. GREENELL.
 " Hampden County.....FRANCIS BROWNE.
 " Hampshire County.....JOHN A. NASH.
 " Hampden, Franklin & Hampshire.....JOSEPH SMITH.
 " Middlesex County.....SIMON BROWN.
 " Housatonic County.....JOSHUA R. LAWTON.
 " Norfolk County.....B. V. FRENCH.
 " Plymouth County.....SETH SPRAGUE.
 " Worcester West.....WILLIAM PARKHURST.

The following letter from Dr. HITCHCOCK was read, declining to act as Secretary of the Board:

Boston, Aug. 21, 1852.

DEAR SIR:—To the unlooked for announcement in your letter, that the Board of Agriculture of this State had unanimously chosen me as their Secretary, I have given all the attention which so distinguished an honor, coming from a body so respected, demands; although I have been severely pressed with labors since the receipt of your letter.

Waiving all other considerations, there is one that seems to decide the question presented for my consideration. I cannot persuade myself that duty will allow me at present to quit the post which I now occupy. This demands all the time and strength which I can command, and even more, and the same would be the case with the office of Secretary, as I view its duties. I have no alternative, therefore, but to decline the proffered honor.

I beg you to convey to the Board my deep sense of obligation for their generous offer, and my strong desire that their minds be directed to the choice of one, younger, more vigorous and competent than myself, for this important post.

With the highest respect, I subscribe myself,
sincerely yours,
EDWARD HITCHCOCK.

This letter was accepted, and ordered to be entered on the records of the Board.

It was moved by Mr. PROCTOR, that the choice of a Secretary of the Board be postponed until the meeting of the Board in December next. Upon this motion an interesting discussion took place. Mr. PROCTOR said he had heard half a dozen gentlemen mentioned as suitable persons for the office of Secretary; some of them well known writers, and others as distinguished for their thorough practical operations. He thought he should be a man of pleasing address, that could familiarly approach the farmer, and of easy access himself. Others engaged in the discussion, and the motion was adopted.

Mr. FRENCH moved that a committee of five be raised to report in reference to the nomination of a Secretary, which motion prevailed, and H. W. CUSHMAN, M. P. WILDER, J. A. NASH, B. V. FRENCH and J. W. PROCTOR were appointed.

The Secretary read a note from JOHN C. GRAY, accompanied by a parcel of wheat sent to him by SAMUEL A. ELIOT. This wheat is from Xeres, in Spain, and bears a high character. It is a large, handsome, hard kernel, and was offered the members of the Board for experiment in various parts of the State.

Mr. PROCTOR moved that such gentlemen as did not have a subject assigned them at the last meeting, designate now what topic they will report upon at the meeting in December;—and the following elections were made:

Rearing and management of Swine,—JAMES S. GREENNELL.

The cultivation of Indian Corn,—JOSHUA R. LAWTON.

Stover and green food for Cattle,—JOSEPH SMITH.

What is the proper season for cutting wood and timber?—GEORGE S. BOUTWELL.

Cultivation of Forest Trees,—CHARLES B. H. FESSENDEN.

[This last assignment was made at the meeting in August, but was inadvertently omitted.]

While the above assignment was going on, Dr. HITCHCOCK suggested that much might be accomplished by some definite action in regard to collecting seeds, plants, implements, minerals, woods, and everything relating to the occupation of the farmer, and placing them in a proper depository: that much might be done in our common schools to lead the young mind into an investigation of the important facts ever about us on the farm:—and that the Secretary might give lectures in the different towns, or the Board send men out to do so.

Dr. REED said, he believed that if the State should incur the expense of placing a handsome suit of seeds of all description, in glass jars, labeled, in every school district in the State, and could thereby exclude three pernicious plants, he

thought it would be a cheap purchase, and that the Board might be exceedingly useful in this particular point.

Mr. BROWN said, he believed the principal cause of the low estimation in which farming, as an occupation, had been held, was a *want of intelligence* in that occupation. It has been too long looked upon as a labor demanding nothing but bone and sinew; a drudgery with the clods, and a contest with insects and the elements. It had lost its intellectual enticements, and a *work for a living* idea had become so common, that to be housed, fed and clothed from the farm, however indifferently, seemed to be by great numbers, as doing pretty well. The true enjoyments and improvements of life were secondary matters, if ever thought of at all. A dollar a day, or its value in meat and bread, is a hard condition of life. He believed if proper measures were pursued in the towns, in the schools, and particularly in the lyceums, new views might be disseminated which would lead to higher studies, practices and investigations, scattering this freezing indifference, and implanting better aims and desires, which would soon place a new aspect upon the face of the land, and a new joy in the hearts of the people. He cited several instances where the initiatory steps might be taken, and progress attained. He thought the sons and daughters of many farmers were not treated with proper consideration; too much time and labor were required of them, and they were too often debarred those privileges and wholesome recreations which are indispensable to the young, and which the young in other classes enjoy. They are necessary for a healthy moral and physical condition, and being denied, discontent and disgust with their occupation take the place of a wholesome ambition in its pursuit.

Mr. FRENCH moved that a committee be raised to confer with a committee appointed by the Legislature, in relation to a suitable room for the meetings of the Board, and Messrs. FRENCH, BROWN and GREENNELL were appointed said committee.

Interesting remarks were made by Messrs. NASH, PROCTOR, PARKHURST, SMITH, LAWTON, SPRAGUE and GREENNELL, but of which we were not able to get reliable notes, while engaged in the business of the session.

On motion of Mr. PROCTOR, a committee consisting of Messrs. PROCTOR, HITCHCOCK and REED, was appointed to take into consideration the subject of agriculture in common schools, and report at the next meeting.

It was then voted, upon motion of Dr. HITCHCOCK, that Mr. WALKER, Secretary of the Commonwealth, be requested to report at the meeting of the Board, next December, upon the best means of promoting the interests of Agriculture in the State, by public lectures.

And the meeting adjourned.

E We have no apology for reporting pretty fully the business of these local meetings; as the interests which they are intended to promote are world-wide, and are as important to our readers every where else, as in the State of Massachusetts.

For the New England Farmer.

SPENT TAN FOR STRAWBERRIES.

MR. EDITOR:—Within a year or two, as you are well aware, much has been said of the beneficial effects of tan upon strawberries, both as a fertilizer and a mulcher; and not upon strawberries only, but plum trees, grape vines, gooseberry bushes, &c. I do not mean now to cite the testimony of others in favor of spent tan, as I might do, and perhaps with profit; but I propose to give you a few items of my own experience,—what I have *seen* and *know* of the good effects of spent tan for strawberries; for I have applied it to nothing else, though I mean another year to experiment extensively with it.

During the latter part of November, 1851, I served my strawberry bed,—which is a small one, being only about twelve rods long by ten feet in width,—in the following manner; the first eight or ten feet I covered with tan, without any manure, about an inch and a half deep; the next eight or ten feet I covered over to a greater depth with well-rotted horse manure and mud, about one-third mud. In this way I went over about two-thirds of my bed, applying the tan and manure alternately; the other third I covered exclusively with tan. Nothing more was done with the bed until the strawberries were ripe, except to pull out a very little sorrel that made its appearance, as it always will on a strawberry bed.

Before giving the result of this experiment, it seems necessary to speak of the soil, location and season; the soil is a hard, dry, gravelly loam, not deep at one end of the bed, but deeper at the other; the subsoil is gravelly, yellow loam; the substratum, blue gravel; located on the side of a hill sloping to the southeast; the season has been one of the best to test the tan as a mulcher, as it has been very dry. Now for the result. Firstly, it protected the plants in winter, and prevented them from being thrown out. Secondly, in regard to the time of ripening, I noticed a difference in favor of the tan of three or four days, though this I acknowledge is of no great importance. Thirdly, there were *more* and *larger* berries where the tan was applied. Fourthly, the berries were not covered with dirt, as they often are where no mulcher is used. And lastly, though not least, there were but *very few* weeds among the tan. The reason why there were more and larger berries on the tan, was because it was “moister” under the tan than under the manure; in fact, so great was the difference in this respect, that in the middle of a hot day—and I believe we had *some* hot ones in the strawberry season—it could be distinctly seen where the tan left off and the manure begun, ten rods distant. To this very obvious difference I called the attention of a neighbor of mine, who is a strawberry grower, and I think he was fully satisfied that tan, as a mulcher at *least*, was valuable on dry lands.

It must not be inferred, from what I have said, that wherever tan is used there will be so percep-

tible a difference in its favor; still I think it can be used advantageously, whatever the soil may be. All strawberries do better if protected in winter; this is just the article to protect them. Where tan is used, I think the plants will not be thrown out, as they often are without it; then it supplies them with tannic acid, which we are informed is one of its component parts; and furthermore, it keeps the fruit from the ground, which is quite an advantage, for where the vines are thin the crop is often unfit for use, the rains covering them with dirt.

Allow me to say, in conclusion, that this winter I shall pursue a somewhat different course in the application of my manure and tan to strawberries; I shall first cover the bed with well-decomposed horse manure, then put on from two to three inches of tan; this, I think, is the best thing that can be done to a strawberry bed. Good friends, give it a trial. J. F. C. H.

Newton Centre, Aug. 6, 1852.

For the New England Farmer.

COAL ASHES—BLACKBERRIES.

MR. EDITOR:—In your weekly paper of 12th June, I notice an inquiry from a correspondent, “whether coal ashes can be used with any benefit in agriculture?” And as I have not seen a reply to this question in any subsequent number of the *Farmer*, I will venture to give my own experience in the matter, small though it may be.

About the year 1840, while publishing the *Farmer's Gazette* at New Haven, I found a heap of anthracite ashes in my garden in the spring—the accumulated siftings from two stoves during the previous winter. Having seen the suggestion in some agricultural paper, that these ashes were of some value as a fertilizing agent, it occurred to me that I might try the experiment without cost. Accordingly, when about to commence the operation of gardening, I spread the ashes over the surface of the garden, as evenly as possible. There were some two or three cart loads of them, and they had lain in a snug heap near the centre of a small garden of not more than four or five rods square. Across the spot where the heap had lain, I had a bed of common blood beets and a few rows of string beans. The general effect of the ashes on all parts of the garden was evidently good; but on the particular spot which had been occupied by the ash heap, the result was really surprising. The growth of beets and beans, in that part of the beds, was nearly double that of the same vegetables beyond the limits of the heap. So marked was the difference, that it was prominently perceptible to the eye as far as the garden could be seen. The soil at New Haven, as you are probably aware, is a light sand.

I have no doubt that coal ashes are worth something as a fertilizer; and that on farms within two or three miles of any of our New England cities, they will pay for carting. Generally, I suppose householders in cities will be glad to give them to any person who will take them away. I think of trying their virtues on a portion of my *mowing*, by spreading them either this fall or early next spring; and if they have any material effect, you may possibly hear from me again.

And now, Mr. Editor, in my turn I would like to ask a question. Can you, or some of your cor-

respondents, inform me when is the proper time to transplant the common field blackberry,—and whether there is anything peculiar in the treatment of the shrub to insure success?

Yours with respect, WILLIAM STORER.
West Hartford, Ct., Aug. 18, 1852.

REMARKS.—We are glad to find such testimony in favor of coal ashes; it has been rather a drug and pest. It is hoped this will induce all to gather it up and make further trial. There is no difficulty in transplanting the high blackberry, so that it shall live and fruit abundantly; but to bring that fruit to perfection is a secret not yet divulged to us. When half grown it seems to rest there for awhile, and then die. It is sufficiently hardy to stand the winter. We have always transplanted in the spring. Shall be happy to hear from our friends who have had experience with the plant. Please write again.

MAN'S FOOD.

What do you really live upon? The answer will be various enough. The Guacho, who in the wild pampas of Buenos Ayres, managing his half-wild horse with incredible dexterity, throws a lasso, or bolas, to catch the ostrich, the guanaco, or the wild bull, consumes daily ten or twelve pounds of meat, and regards it as a high feast day when in any hacienda, he gains a variety in the shape of a morsel of pumpkin. The word bread does not exist in his vocabulary. The Irishman, on the other hand, regales himself in careless mirth on his "potatoes and point," after a day of painful labor, he who cannot help making a joke even of the name he gives to his scanty meal. Meat is a strange idea to him, and he is happy indeed if, four times a year, he can add a herring to season the mealy tubers. The hunter of the prairies lays the buffalo with sure bullet; and its juicy, fat-streaked hump, roasted between two hot stones, is to him the greatest of delicacies. Meanwhile, the industrious Chinese carries to market his carefully fattened rats, delicately arranged upon white sticks, certain to find a good customer among the epicures of Pekin; and in his hot smoky hut, fast buried beneath the snow and ice, the Greenlander consumes his fat, which he has just carved, rejoicing over the costly prize, from a stranded whale. Here the black slave sucks the sugar-cane, and eats his banana; there the African merchant fills his wallet with sweet dates, his sole sustenance in the long desert journey; and there the Siamese crams himself with a quantity of rice from which a European would shrink appalled. And wheresoever over the whole inhabited earth we approach and demand hospitality, in almost every little spot a different kind of food is set before us, and the "daily bread" offered in another form.

THE STING OF A BEE.—In most cases the person stung can instantaneously obtain relief by pressing on the part stung with the tube of a key. This will extract the pain and the application of *Quia amonia* (common spirits of hartshorn) will immediately remove it. The poison being of an acid nature, is at once neutralized by the application

of this penetrating and volatile alkali. A small quantity introduced into the wound on the point of a needle, or fine nibbed pen, and applied as soon as possible, will scarcely ever fail.

For the New England Farmer.

AGRICULTURAL COLLEGES.

In looking over the June number of the *Farmer*, I was surprised to see an article by "W. A.," opposing the establishment of an Agricultural College. His objections may be classed under two heads. 1st, That there is no necessity of such an institution. 2d, That it would not be properly conducted. He says, "the means for obtaining all necessary knowledge on agriculture already exist, and are afforded in books, periodicals and agricultural exhibitions."

Agriculture is both a science and an art; can both of these be thoroughly learned from books and agricultural fairs? He admits the art can only be learned by practice; then the art cannot be learned by the means which he named as being sufficient for all "increased and necessary knowledge on agriculture!" Can the art be taught efficiently without combining it with a knowledge of the science? Certainly not. And is the science of agriculture so simple, that unlike all others, it requires no teachers to explain and enforce its principles? On the contrary, so profound a science is agriculture, that it has required the wisdom and experience of ages to bring it to its present imperfect state of advancement. Ages more will be required to reveal all the philosophy necessary for its perfection. No profession requires so much study and preparation as that of agriculture; yet many act as if it could be learned by intuition. A knowledge of more sciences is comprised in a thorough agricultural education than in any other; yet many of those, the most intimately connected with it, are imperfectly taught, if at all, in our best colleges. Agriculture is the leading pursuit of our country, and its unbounded importance to all classes, is denied by none; yet even in the Old Bay State, where farmers have paid liberally for the support of other colleges, we are told it would not be economy to endow an agricultural institution! Heretofore it has been the boast and glory of New England, that the State governments have been so efficient in sustaining schools for the education of her youth. The intelligence of New England is proverbial, and every census attests her rapid increase in wealth and importance. To continue this progression, improved systems of education must be fostered, and superior institutions of learning liberally encouraged. Agriculture is susceptible of more rapid progression than any other pursuit, yet its advancement does not keep pace with others of less interest. Private individuals do not often possess the means or disposition to make experiments in agriculture on an extensive and reliable scale. If a State Institution were established, liberally endowed, provided with competent professors and tutors, and a farm of sufficient extent connected with it, an opportunity would be afforded, not only of obtaining liberal education, but of becoming thoroughly acquainted with the physical sciences, nearly all of which have a direct bearing on practical farming. Dr. Lee, in speaking of the necessity of such an institution, makes the following remarks:—"The peo-

ple of the United States have over three hundred millions of dollars invested in domestic animals, and if a young farmer engaged in stock growing wishes to study the digestive organs, the muscles, nerves or blood-vessels of the horse, cow, sheep or hog, he must cross the Atlantic for the purpose, or remain in ignorance."

But "W. A." thinks a practical agriculturist, who understood mechanism and the use of implements, would not be elected president of an agricultural college. Why, he does not inform us. I suppose because there are few with the proper qualifications. Is this an argument against the establishment of such an institution? If there are few or none capable of directing or teaching, it shows our ignorance of those subjects which he acknowledges to be necessary to a good agriculturist. This proves the necessity of such an institution. When medical schools were first founded in this country, nearly all our teachers of anatomy, physiology, surgery, theory and practice of physic, &c., were educated abroad! Had his logic been enforced, we would still be destitute of medical schools. He farther says, that it would exclusively benefit the rich. Why would an agricultural college exclusively advantage those in affluent circumstances? If his arguments are correct the probabilities are against it. He says the rich have an aversion to labor; if so, would they be likely to attend an institution where labor constituted an essential part of their training; and would not such young men be more likely to love labor, and be better able to endure it, when trained to it, than they now do?

But allow that nine-tenths of the farmers of Massachusetts are opposed to it, and that the one-tenth who would avail themselves of its advantages are rich, both of which I deny, is this a reason for not establishing it? If none but youth with affluent expectations should attend such a college, the probabilities are, many of them would feel a pride, and take delight in their profession; possessed with ample means, they would more fully carry out their scientific instructions, and perform experiments on a more extended plan than they otherwise could. Each graduate would become a missionary in his profession, in his respective locality; and the knowledge, for which he had lavished time and money, would be a light set upon a hill and could not be hid. Besides this, the institution itself being a practical one, would be constantly performing experiments, and making valuable discoveries, which would be carried to the most remote parts of our country by agricultural journals, which once encountered as great opposition as agricultural schools now do. Chemistry is comparatively a modern science, yet the light it has shed on agriculture is as startling and encouraging as it is new and useful. Will "W. A." contend that chemistry can be taught by books and fairs? Surely not; we must have teachers to explain its principles, manner of using apparatus, &c. Would the mass ever understand mathematics, botany or geology, by reading books? Facts prove the negative. The few that do are an exception to the general rule. *To obtain an education without schools, is as possible as to obtain an agricultural education without agricultural schools.* The practicability of agricultural schools is not a new chimera; first class agricultural schools are now, and have been for years, in successful opera-

tion in all the principal countries in Europe. In this country a wider field is open to agricultural pursuits than in any other; yet to our shame not one National or State Institution can be found. It is a craven policy to refuse the means for an education which would return a hundred fold to the wealth of the nation. In our best grain-raising States, isolated facts prove that the average amount of grain per acre might be doubled, if farmers were sufficiently informed on the subject of manuring.

It is my lot at the present time to be a tutor at an agricultural Institute, which has been in successful operation for the last eight years. It was founded in the State of New York, by the present principal—J. Wilkinson, and removed to this place in 1847. It now numbers 25 students. Having passed my youth principally in agricultural pursuits, since which time I have had frequent intercourse with farmers in the most intelligent districts of Pennsylvania and several other States, I am somewhat prepared to judge of the relative advantages of farmers' sons generally, and the pupils of this Institute, and I am satisfied, the advantages offered to the latter are ten fold greater than the former. In conclusion allow me to remark, that I am a native and citizen of Pennsylvania, and can therefore have no other motive in writing this article, than to promote the truth, and elevate so noble an occupation as that of agriculture.

LEWIS H. GAUSE.

Mount Airy Agricultural Institute,
Germantown, Pa., July 29, 1852.

THE EYELID OF THE TREE-TOAD.

The peculiarity of the glass-like transparency of the lower eyelid of the tree-toad (which, in those animals, is the larger, and performs the office of closing the eye) is well worthy of notice. I have elsewhere remarked a structure exactly similar in the wood slave, (*Mabouya agilis*), a pretty little Scincoid lizard that plays about walls in Jamaica. In both cases we may consider it a beautiful and effective provision for the protection of the eye during the rapid movements of the animals, where sight would be indispensable. The tree-toad dwells habitually among the heathering leaves of the wild pines, always stiff and leathery, and often armed with sharp serrated spines at every edge. Among these it moves to and fro by violent headlong leaps, in which it needs to be guided by the sharpest sight. How interesting, then, is it to see that its gracious Creator has furnished it with a glassy window, which it may in a moment draw before its eye, for shelter from danger, without in the least hindering the clearness of its vision! This structure has not, I believe, been noticed by any naturalist; and, indeed, it is scarcely perceptible when the delicate membrane has become opaque by immersion in spirits. "All thy works shall praise thee, O Lord!"—*Naturalist's Sojourn in Jamaica.*

AIR PLANTS.—S. S. Osgood, who has recently crossed the Isthmus at Nicaragua, says:—"On every tree I noticed hundreds of air plants, a parasite which attaches itself to any part of the trunk, dead or alive, it matters not which. I have now three hanging up in my state room, (June 17th) which I gathered at Costello's Rapids on the 7th. Until we came on board the steamer, a week since to-morrow, they were tumbled about in my basket with fruit and other things, and yet they

are still living, but not so fresh as I presume they would have been if they had been out in the open air and felt the influence of the rain and dews. They are shaped like the top leaves of the pine-apple, and from the centre springs a beautiful orange flower, the upper side of which is a bright yellow."

HINTS FOR THE AGRICULTURIST.

Cold water, administered externally, or in the form of a bath, is a certain cure for prussic acid. Cows and other domestic animals are often lost from the poisonous effects of cherry leaves—particularly the leaves of the black and red cherry which are found growing in a state of nature in fields and pastures, and which contain prussic acid in sufficient quantity to render them fatal when eaten by ruminating animals, either in a green or wilted state. When an animal has been poisoned in this way, it should be plunged into cold water, or have it dashed over its body in bucketsfull from the pump or well.

SHEEP.—These animals should be protected from cold and wet, though they have access to the ground. At all seasons protection of the most efficient kind should be afforded them, as no animal is more injured by the wet, and especially by long storms. Sheds should be erected in pastures, to which they can retire whenever the weather is cold or stormy, and supplied with troughs, containing salt and ashes—one part of the former to three of the latter. When not protected, sheep often take cold, even in summer, which produces coughs and other affections which too often have a fatal result.

HOG MANURE.—There are probably few articles of a fertilizing character which possess greater intrinsic excellence than hog manure. On this point, indeed, there appears to be no discrepancy of opinion whatever, among practical men. By furnishing materials, large quantities could be made annually, and at comparatively little cost. On this subject a judicious farmer observes:—"It appears to us, then, an object of considerable consequence to farmers, that he should avail himself of this resource for fertilizing his soil as far as possible, and that methods should be adopted by him to preserve, and increase the amount at his command, as far as may be, and not allow the avails of his pig-pen to be lost to the farm, as is frequently done. Where pigs are allowed a small yard to run in from the pen, they may be made to produce a large quantity of good manure, by frequent additions to the material in the yard of straw, weeds, turfs, muck, or even good common earth, to absorb the fluid part of the manure, and prevent its salts from escaping." Yet there are many farms on which little of this invaluable article is produced, compared with what might be furnished by the number of animals kept.

WORKING COWS.—The cow is seldom subjected

to the surveillance of the yoke in this country.—Why, more than the mare, she should be considered entitled to this exemption, is a question not easy to be solved. In many cases where cows have been moderately worked, they have not been at all injured thereby, and have produced nearly if not quite as much milk as when suffered to employ their leisure on the best of feed. Mr. COLMAN, in his European Tour, mentions an instance where a man in Sussex, England, who cultivated a small farm of four acres and kept two cows, worked one of the cows in a cart, by which he made a saving of twenty-four dollars a year. Notwithstanding the cow was worked, she made *eight pounds* of butter per week, besides furnishing some milk for the family. In Massachusetts a man has performed all his farm work with four cows; hauling wood, stone for walls, &c., as with oxen. The cows were two years old when first yoked, and were "broke in" in three days, so as to be perfectly manageable and kind at all times.

EDITORIAL DELINQUENCIES.

Who is "EXCHANGE!" We see many of our articles copied into other papers credited to "Ex." and "Exchange," and sometimes to "Exchange paper." Now this occurs so often that we are led to think those who "*hook*" these articles know full well what paper they originate in—nay, that they are often direct from the *Farmer*. Is this doing the honest thing, brethren! When you *thunder* with our *thunder*, have the goodness to label it correctly.—*Maine Farmer*.

"Who steals my purse, steals trash; 'tis something, nothing; 'Twas mine, 'tis his, and has been slave to thousands; But he that filches from me my good name, Robs me of that, which not enriches him, And makes me poor indeed."—*Shakespeare*.

Hit them again, Brother Holmes, "they have no friends," and never will have until they observe the conventional courtesies of the press.

When an editor publishes the results of laborious thought or experiment, it is for the purpose of instructing his readers, and, also, by having his articles copied into other papers, to receive an increase of subscribers. He gives his brethren of the press the use of his brains, in exchange for the advantages arising from their advertisement of his articles: but when the conventional credit is not given, he is robbed, and in a most flagrant manner. Have no mercy on these pirates, brother Holmes, we will willingly join you in the warfare, and chastise the lazy loons, who steal from others, rather than write themselves.—*Working Farmer*.

We have in our mind a paper, which copies good articles and credits them "Ex.," but when they wish to correct an error and show how smart they are they always give credit. When we see "Ex." in a paper we feel like adding "stolen from a source which we do not like to credit." Some editors make up first-rate papers by putting in them "original" matter "*hooked*" from other papers.—*American Artisan*.

☞ If men will not observe the proprieties of life among their *own craft*, they certainly ought not to be trusted any where else. There is a practice

more to be condemned than open piracy upon one's columns; and that is of extracting paragraphs here and there throughout a column and mixing them up with crude and ill-digested opinions, and palming off the whole as original. If you have little inclination for the business, and less experience, go to some other employment, and not disgrace yourselves and the calling by leading others into false practices and opinions.

For the New England Farmer.

THE TOWN OF WILMINGTON—LOCAL ADVANTAGES FOR BUSINESS.

MESSEURS. EDITORS:—Since the turnpike road from Concord, N. H., to Boston, was constructed, and other alterations made in the thoroughfares to lessen the travel through Wilmington, very little business has been carried on here besides farming, shoe manufacturing, and the business at the baking establishments of the Messrs. Bonds. It has been a prevalent idea abroad, that the land was poorer here than in many of the adjacent towns. I admit the soil is stronger, and *much harder to operate upon*, than here, in many of the regions round about. We are not so subject to confusions and goadings of plow handles here as I have experienced on *strong* soil in guiding that instrument which turns the surface of the earth "upside down." When the advantages which facilitate the farming operations on our level land, free of stones, with a warm pliable soil, not retentive of water, nor inclined to bake, which bears drought much better than land with a large proportion of clay, are taken into consideration, the strong, stony, hilly, retentive, and of course cold land, that will require all the muscular powers and firmness of bones in possession of the farmer to be expended in his farming operations, with all the manure he can make or conveniently purchase, the warm, free, level soil, on trial, will be found to have been underrated through prejudice or ignorance of its nature and quality. I believe it is a fact, that the warm soils, throughout the country, which are most cultivated, which have produced without manure, have lost their character by their too readily yielding crops to the cupidity of the avaricious occupant, who is not satisfied with fleecing merely, but further gratifies his covetous desires by skinning also. There is as much wisdom and good calculation displayed in such farming as there was in the fabulous story of the man who dissected the fowl that laid the golden eggs in his eagerness to get rich. This kind of warm "free soil" will well compare with the free horse which is driven to death because he is free. Only treat this kind of land as we are necessitated to treat the compact, strong cold land, with the same quantity of manure and half the labor, and I believe the farmer would realize as profitable returns as he would from his strong stony soils.

Our lands here, judiciously cultivated, would produce a great variety of market vegetables. Asparagus, and every variety of the vine and root crops, adapted to the climate, may be raised here to perfection; as far as my experience has gone, I have seen no better land for onions. Cranberries might be raised to great advantage on an improved plan of cultivation; here is much

soil well adapted to their growth. I know of no better land to produce wood, nor no better market for the sale of it, than in Wilmington; our poorest lands seem to delight in displaying their wonderful propensities in producing a speedy crop of it for the use of families or locomotives, and I think it a crop attended with the least expense in raising, and will afford the largest profit to the farmer of any individual article produced on a large farm. Another consideration in favor of easy, pliable soil, is the comparative ease of performing the labor. I have observed, and heard others make the remark, that those who worked on light land free of stones, retained their sprightliness and activity longer than those who worked on hard, heavy, strong land.

Another important advantage to business men, is that of railroads. We have three distinct railroads passing through the town, and four well located depots. One railroad from Lowell to Boston, one from Maine to Boston, and one from Lowell to Salem, affording advantages and facilities for business and travelling, possessed by few other towns. A considerable number of residents here have season tickets, and daily do business in the cities. The land is selling at high prices below us on the Maine railroad, which would be a pecuniary inducement to those who wish to purchase land cheap to look a little further up.

Wilmington is 15 miles from Boston and about the same from Salem, nine miles from Lowell and about the same from Lawrence, surrounded with cities and villages, and a very healthy town well supplied with soft water. Mechanical business of all kinds might be carried on here by steam or water power; the convenience of conveying all kinds of produce and manufactured articles to and from the cities and the country is very great. Favorable locations for tanneries nigh the railroad depots, might be purchased at reasonable prices, and pleasant locations for dwelling-houses and mechanics' buildings may be bought as low as in any other town in the vicinity.

The larger number of young men here, think they can do better at manufacturing than farming. The want of capital is a serious obstacle, in the way of most young men, which induces them to go into other business in preference to farming. The farmer is under the necessity, about here, of possessing a few thousands of capital to be able to work the farm to advantage. After all, the farmer's life and occupation is most conducive to a peaceful mind and a conscience void of offence; he has the least reason to be discontented, and the greatest reason for gratitude of any man living; he can live with less hours of daily toil than the mechanic, he is not harrassed with vexations of fault-finding customers to make him unhappy, but he places his dependence upon an all-wise Providence, who judges righteously and rewards every man according to the deeds done in the body, as I hold firmly. With much respect,

Wilmington, July, 1852. SILAS BROWN.

AGRICULTURAL FAIR.—The Addison County Agricultural Fair will be holden at Middlebury, Vt., on Wednesday, Oct. 6th, 1852. The officers are, HARVEY MUNSILL, President; JOSEPH H. BARTON, Secretary; HARRY GOODRICH, Treasurer.

"WHAT'S IN A NAME."

The English language is said to be the most copious in the world. For speaking prose or writing poetry—for making love, or making fun—for orations, stories, jokes or epitaphs, no other language, so say the knowing, can equal ours. One would suppose, that an American who has a definite idea, and desires to impart it, might find abundant scope for the most expansive expressions in the vernacular; and as to *concealing* thoughts, which the crafty old Frenchman said was the true use of words, what can furnish better material than the ambiguities and half synonyms, half contradictions of a language like ours; a cross between Latin and Saxon, with a touch of Greek, chopped up with thousands of Yankeeisms?

Farmers usually, in New England, think in English, as they talk, and we opine they understand English much better than French.

The Fruit Committee of the Massachusetts Horticultural Society probably think otherwise, or they would not christen new fruits sent them for names, in that language.

We notice among the names recently conferred on an honest, Yankee apple, of no special pretension, by that Committee, that of "Api Gros d'Ete," which doubtless, to the Frenchman, conveys a very euphonious indication of some peculiar qualities of the fruit, but which to us, who deal mainly in the pure Saxon, only makes "confusion worse confounded." Translating the name according to the smattering of the language we have, it would seem to mean, *a small delicate large summer apple*—and supposing it to mean anything more consistent, how many of our fruit raisers will ever pronounce it! And then, where's the propriety in confusing French and American fruit in this way? Let the French pears keep their French names if you please, but let us know American varieties of all fruits by American names.

Greek is a very convenient language for the doctor, and Latin for the lawyer, but to the New England fruit cultivator, we ask, with Burns—

"What's a' your jargon o' your schools,
Your Latin names for horns an' stools?"

One language answers our plain purposes well enough.

For the New England Farmer.

WILD CHERRY POISON TO COWS.

EDITORS N. E. FARMER:—A farmer in Plymouth County, who keeps a considerable number of cows, informs us of an occurrence which happened to them, in the summer of 1850. The dairy woman complained of the milk. The cream would not make butter as readily as usual. The process of churning became very laborious; and, in four or five days, two men could not bring the cream into butter in less than an hour and a half, steady work. The owners thought that the evil must lie in the churn, or in the pails, or in the temperature; but, on examination, nothing was found

amiss in all these respects. He then concluded that the cows must have eaten some injurious food; and, to ascertain how that might be, he followed them to the pasture. On the opposite side of the wall which enclosed the pasture, was a thick belt, or grove, of miscellaneous trees, bushes and shrubs, with their branches hanging over the wall. He observed that, as soon as the cows were let into pasture, they went to the wall, and greedily devoured the leaves and spray of the wild cherry tree, to the full extent to which they could reach them. He was no longer at any loss to account for the difficulty with the milk, for he had known three cows killed in one day, by eating the wilted leaves and small branches of a wild cherry tree, which the wind had blown down in the pasture. Of course, the cows were immediately removed to another field; and in two or three days, their milk resumed its proper quality. The juices of this tree are supposed to contain prussic acid.

Aug. 28, 1852.

STONES ON CULTIVATED LAND.

It is an error to suppose that stones should be entirely removed from land which is under cultivation. The stones which would be in the way of the scythe while mowing, of course should be removed, but all the smaller ones should remain; and if wholly or partially imbedded in the soil, they preserve the moisture during a drought, and thus serve materially to increase the crop. The following article from the *Gentleman's Magazine*, published in 1773, is to the point:

"It has been long known to experienced farmers, that taking away very small stones and flints, is detrimental to plowing lands in general; but more particularly so to thin light lands, and all lands of a binding nature. It was, however, never imagined that the damage could be so great as it is now found to be, since unusual quantities of flints and other stones have been gathered for the use of turnpike and other roads. In the parish of Serenage, in Hertfordshire, there is a field known by the name of Chalkdell field, containing about two hundred acres; the land in this field was formerly equal, if not superior, to most lands in that country; but lying convenient for the surveyors of the roads, they have picked it so often, and stripped it of the flint and small stones to such a degree, that it is now inferior to lands that were formerly reckoned not much over half its value, acre for acre.

"Nor is it Chalkdell field alone that has materially suffered in that county by the above-mentioned practice; several thousand acres bordering on the turnpike roads from Wellwyn to Baldock have been so much impoverished, that the loss to the inheritance forever must be computed at a great many thousand pounds. What puts it beyond a doubt that the prodigious impoverishment of the land is owing to no other cause but picking and carrying away the stones, is, that those lands have generally been most impoverished, which have been most often picked; nay, I know a field, part of which was picked, and the other part plowed up before they had time to pick it, where the part that was picked lost seven or eight parts in ten, of two succeeding crops; and though the whole field was manured and managed in all respects alike, yet the impoverishment was visible where the stones had been picked off, and extended

not an inch farther; an incontestible proof of the benefit of the stones."

THE INDEPENDENT FARMER.

BY T. G. FESSENDEN.

It may be very truly said
That his is a noble vocation
Whose industry leads him to spread
About him a little creation.
He lives independent of all,
Except the Omnipotent donor;
Has always enough at his call—
And more is a plague to its owner.

His labors are mere exercise,
Which save him from pains and physicians;
Then, farmers, you truly may prize
Your own as the best of conditions.
From competence shared with content
Since all true felicity springs,
The life of a farmer is blest
With more real bliss than a king's.

For the New England Farmer.

IS FARMING PROFITABLE?

This question has long been and still is a topic of much interest. Editors of agricultural publications, orators on agricultural occasions, and the "friends of the cause" generally, seem to feel themselves bound to decide it in the affirmative. Amateur farmers have entered the field, and in some cases have resorted to rather questionable "cyphering" to prove it a money-making occupation; and in other cases, have engrafted upon it branches of business nearer allied to the commercial than to the farming profession. Nor, in my opinion, should the fruit and vegetable gardens, near cities, be taken into the account at all, though they are so often cited on one side of the question. From the circumstances of their location, &c., they are clearly exceptions to the general rule; as much so as are the many broad acres that are covered by the waves which float home the ships of the merchant princes, whose traffic enables them to build the delightful villas that skirt our large towns. Not allowing, then, any "Pent up Utica to contract our powers," but extending our observation over the whole broad expanse of our country,—*Is farming profitable?*

As merchants, manufacturers, bankers, speculators, professional men, &c., count "profit," I have no hesitation in answering in the negative. And with reverence, I can say, heartily, *I thank God it is not.* I can imagine no greater curse to our land, than that farming should become *profitable*; as profitable, I mean, as commercial and professional pursuits, generally. If farmers could afford to bring up their families in those habits of idleness and extravagance which merchants and many of other professions are able to do, how long before our whole land would become a Sodom or Gomorrah? Who does not know that a great majority of the business men of all cities are reared in the country; that but for the constant flow of health and energy, of enterprise and vigor, from the country to the city, the latter would soon become bankrupt in character and population? This fact is well understood. The country is the nursery of men. The more sterile the better. The more unprofitable the occupation of the youth, the more rigid the principles of economy and industry that he has been subjected to, the better

for the man. As the case now stands, the farmer who would make "the ends of the year meet," is under the absolute necessity of requiring the constant aid of every member of his family. His boys and girls, himself and wife, must work and save. No drone can be tolerated. The old grandmother, and the youngster, find something to do. Every cent is counted, and must be, as well as every moment. Here is no "strike for the ten-hour system." They "work while it is day." And then their economy as to dress, furniture, equipage, &c. Those who, like myself, spent their first score active years upon a farm in the interior of a New England State, and the second like period in villages and cities, will call this no over-drawn statement; nor can they fail to have noticed the contrast between the economy of the families of farmers in the country, and those of other classes and professions who congregate in villages and cities. Were farming as profitable as these various professions, would farmers not also shrink from making "drudges" of their sons and daughters? If they could afford it, would they not take life easier, and fare and dress better? As well as other folks? This certainly is human nature. But every one acquainted with farmers, who are farmers only,—who look to their farms for support,—who have paid for their farms by farming,—knows that they do not;—that they cannot. And the only reason is, that farming is not profitable.

If farming were as profitable as manufacturing, for instance, capitalists would invest in real estate, and by means of overseers and operatives, effect a most undesirable change in the condition and relations of our agricultural population. Who would exchange our present condition for any thing like the "factory system," or like that state of things which existed when agriculture and war were the only professions that became a gentleman, and real estate the only idea of wealth? Though other professions and pursuits are more richly rewarded, in dollars and cents, in honors and emoluments, let us count up our mercies, as well as think of our hard lot. Is it nothing,—may we not exult,—that New England soil will not support a corps of "overseers," though "scientific;" that the haughty baron and his retainers, or that the "good old English gentleman," even, cannot endure our climate? Nothing, that here the poorest boy—the son of a very pauper—may reasonably look forward to the time when he shall own a farm—a house and barn—flocks and herds! Though he may never dream, like the merchant's clerk, of mansions and servants, of founding colleges or endowing asylums, is not his a healthy ambition? While, therefore, we feel compelled to admit that farming has small claims upon one whose sole desire is to become "rich," we have no fears of driving every body into other professions. Engrossed as the American people are by the love of gold, their better affections are still alive. The advantage to a family of the severe discipline of a farm is understood and appreciated. As their business is unprofitable, farmers are compelled to train their families to such habits of economy, industry, and persevering labor, that they thereby qualify them for success in whatever business or profession they enter; while many other occupations being more profitable, render such habits unnecessary; and consequently the families of these people, though better educated, and, perhaps, as young men and

women, make a better appearance,—smarter,—fall in the long pull of life, and come out, at the end of the race, far in the rear; or what is more common, give it up at the very commencement, and leave a clear field to their better trained competitors. S. F.

Winchester, July, 1852.

REMARKS.—We like the fresh and earnest manner in which our correspondent discusses his subject, as well as the original views in which he treats it. But he clearly shows that farming is profitable, in the true sense of the word. It makes true men and women, and affords a sufficient return to enable them to make *other* true men and women.

LIQUID AND SOLID MANURES.

Charles Alexander, a careful and accurate farmer in Scotland, found that while 14 head of cattle would make six loads of solid manure, the liquid saturated seven loads of loam, rendering it of equal value. He had repeated the experiment for ten years, and found the saturated earth fully equal to the best putrescent manure. How many dollars' worth are thus lost annually, by each of the million farmers in this country? And what is the aggregate loss in the whole country taken together!

The above is from the *Bridgeton Chronicle*, and is true to the letter. We know it by experience, and as we have often before asserted, the liquid manure of animals, if properly saved and applied, is worth more than their solid excreta. It should not be permitted, however, to run to cisterns, and there become cold, but should be received while it contains the animal heat, upon some easy decomposable material, which is at the same time capable of receiving and retaining the ammonia liberated during the early decomposition of the urine. Pulverulent swamp muck, and all other organic matter sufficiently carbonaceous in its character, is suited to this purpose.—*Working Farmer*.

So according to Mr. Alexander, as informed by careful experiment continued 10 years, the liquid excretions are worth more than the solid. So good an authority as Prof. J. J. Mapes tells us that this is true, every word of it. And yet in our own country, nearly all this is suffered to run to waste.—*Amherst Express*.

We do not know by any actual experiment that "the liquid excretions are worth more than the solid," but hardly doubt it, and believe that every pains ought to be taken by the farmer to prevent the liquid droppings from his cattle from running to waste or being dissipated into the air.

OLE BULL'S GREAT PURCHASE OF LAND.—The Coudersport (Pa.) *Journal* announces that Ole Bull has purchased one hundred and twenty thousand acres of land in that county, which is to be settled by his countrymen immediately—thirty of them have already taken possession. This section of land, which is described as a wilderness, lies in the south-eastern section of the State.

DEEP PLOWING.

The present season has proved to the satisfaction of every observer, that in deep plowing is to be found the principal security against drought. Fields tilled only to the depth of six or seven inches have suffered from the severe dry weather, while side by side with them may be seen crops that have not seemed to feel the drought at all. In passing over several river farms a few days since, we found pieces of corn where the leaf was rolled, and the color was light and verging towards a yellow. On one of these we passed with a step from corn of this description to that at least a foot taller, of a deep lively green, and a broad uncurled leaf. Every thing indicated an entirely different crop. We immediately turned to our companion for an explanation. The seed was the same with the single exception of the use of a subsoil plow on this latter part. The gentleman had never used the subsoil plow before, and tried it upon this piece as an experiment. It was to him perfectly satisfactory, (it certainly was so to the looker on) and he said he should use it on all his farm.

We have no doubt that subsoil or deep trench plowing would be equally beneficial in a season of much rain. Of course when the supply of water is from springs or the under current from higher land, it must be cut off by draining.

To prevent crops from suffering from the drought, plow deep and stir frequently the surface.—*Granite Farmer*.

THE PROPER TIME FOR PRUNING.

A correspondent makes some inquiries relative to the proper time for pruning apple trees, and remarks that it has been the general practice to prune in the spring. Very small limbs may be safely cut off at any season whenever it is convenient; and when the trees have the proper care and attention, it will seldom be necessary to remove any large limbs. But there are many trees which have been badly neglected, and large decaying and profitless limbs should now be removed from them; and where this is necessary, fall is a more suitable time than the spring, for the reason that the wounds made in autumn will remain dry and sound for years, and until the bark closes over them, while wounds made in the spring turn black and decay, leaving holes which frequently ruin the tree. Mr. Cole, the author of the *American Fruit Book*, prefers October, November, or even December, to the spring, which, he says, is the worst season.

"Just thirty years ago, in September," he remarks, "we cut a very large branch from an apple tree, on account of injury by gale. The tree was old, and it has never healed over; but it is now sound, and almost as hard as horn, and the tree perfectly sound around it. A few years before and after, large limbs were cut from the same tree in spring; and where they were cut off the tree has rotted, so that a quart measure may be put into the cavity."—*Maine Farmer*.

Death of Prof. Norton.—It becomes our painful duty to announce the death, on Sept. 5, of John P. Norton, Professor of Agricultural Chemistry in Yale College. Mr. N. was a young man of high attainments in his profession, and justly esteemed for his moral and social qualities by a large circle of acquaintances.—*New Haven Register*.

HORSE DRILL MACHINE.

Because we have made many and important improvements in farm implements in this country, it ought not to be supposed, by any of us, that we have arrived at perfection, or that there are none in other parts of the world which may prove of essential benefit to us in our modes of husbandry. The English people have many excellent machines and implements; but according to our ideas of the fitness of things, they are, most of them, extremely faulty. We examine the *expenditure of labor*, as closely as of the dollars which that labor has produced. No power is wasted. Our farms are probably cultivated with a less force of men and teams than the same amount of labor requires in any other portion of the world. Plows are graduated to all sorts of soils and circumstances, from those scarcely too heavy to be drawn by a man, to those requiring sixteen lusty oxen. If the hoe is an half ounce too heavy, or the shovel handle two inches too short, down sits the farmer's boy and calculates how much power is uselessly expended in one, and what an unnecessary tax and exertion upon muscle and tendon is required, in the other. Consequently, our implements have the weight and strength sufficient to perform the service needed in them, and nothing more. But it has not been so with English implements. They have been placed in the hands of workmen unaccustomed to compare and think for themselves what tools would work best in certain places, and at the same time somewhat careless in the use of them. The manufacturer has made them stout to withstand a careless usage, and thus all the implements of husbandry in England are greatly too heavy.

But they have many excellent tools and machines, well worthy of our attention, and among them the one represented at the head of this ar-

ticle. We have been much pleased in witnessing the operations of the *Horse Drill*—it is rapid in performing the work, does it well, and leaves the field in the neatest culture. One evident advantage of sowing with a drill over the broadcast machine, or of sowing by hand, is the regular deposition of the seed at one depth, whatever depth may be chosen. Another advantage is the *saving of seed*: the kernels all being deposited at equal distances from each other, as well as at equal depths.

This machine will plant wheat, rye, Indian corn, oats, peas, beans, rutabagas, &c., and can be regulated to drop any required quantity on an acre. The drills can be thrown in or out of gear separately, so as to plant a field of any shape without seeding any part twice. They are so arranged as to operate well on all kinds of land—hilly and rough, as well as level and smooth. A man with two horses, can put in from 10 to 12 acres with wheat in a day; and with one horse he can plant 20 acres of corn per day.

There are two or three different kinds, some possessing advantages which others do not, and costing more. We hope to see them introduced among us, at such prices as will make them accessible to every considerable farmer.

FAIR TESTIMONY.

At a meeting of the *Hillsborough Agricultural Society*, held at Weare, August 26, 1852, Brooks Shattuck, Esq., of Bedford, N. H., said, he had been 22 years employed in a mill, and for 15 years of the time received from \$2.00 to \$2.50 per day, but could make more money upon his farm than in that employment. We know Mr. Shattuck, well, as an enterprising, progressive farmer—one who does not hug old notions, but believes in pro-

gress; reads the books and papers, compares experiments, and awakens in others about him new views and desires in relation to agricultural employments. We need thousands of such men—we want their energy and example, to reclaim our rugged hills and send fitness into the valleys. In a future meeting of the *Farmers' Club*, we hope he will give his associates a statement of the *comparative enjoyments* of the two occupations of the mill and the farm.

SAVING SEED CORN.

Mr. F. Holbrook, a distinguished farmer of Brattleboro', Vermont, has published a long communication on the subject of cultivating Indian Corn, in which we find the following mode adopted by him in selecting his seed corn, and we extract it for the benefit of the readers of the *Telegraph*, if better than the mode used by them:

"While upon my present subject, I will say a word about saving seed corn. All experienced farmers are aware that the productiveness and early ripening of any kind of corn, depends very much upon the manner of selecting the seed. I have a long-eared variety, which I have been planting and improving for some ten or twelve years; and although during that time I have tried, I presume, a dozen other sorts, I give the preference to the first-named sort. Whatever may be said in favor of a change of seed, as regards other crops, there is no need of changing seed corn, provided proper care is used in the yearly selection of that for planting. By proper attention to this matter, a variety may be perfectly adapted in its habits to a given climate and soil, and changed much for the better as to productiveness. The difference in product, between careful selection in the field, and taking seed at random from the crib, will, in a very few years, be much in favor of the former mode—the soil and cultivation being in both cases alike.

"As soon as the earliest ears are thoroughly glazed, I go over the field myself, selecting from those stalks that are 'stocky' and vigorous, and that produce two good ears. The selected ears are taken immediately home, braided, and hung up in a dry, airy place. When I commenced with my favorite variety, it was difficult to find twin ears; but now they are abundant. My crops also ripen ten days earlier than at first. I will not mention the length of the ears that might be found in my fields, but will say to you, Mr. Editor, come and see for yourself."—*Germanstown Telegraph*.

For the New England Farmer.

TRANSPLANTING FRUIT TREES.

MESSES. EDITORS:—Will some of your correspondents inform me, through the columns of your paper, the best month for transplanting fruit trees, likewise the best manner of transplanting them.

Blackstone, 1852.

W. A. D.

REMARKS.—April is the best month, although Mr. Downing thought October as good. If it is more convenient to transplant in the autumn, we do so. See former numbers for the mode of transplanting.

PHYSICAL RECREATION.

Now that the fine weather has commenced, and we have before us a glorious summer, we trust that our city mechanics and workers generally will avail themselves of every opportunity for physical recreation. Bodily exercise is one of the most important means provided by nature for the maintenance of health, and in order to prove the advantages of exercise, we shall show what should be exercised, and the modes by which it may be adopted.

The human body is in reality a machine, the various parts of which are beautifully adapted to each other, so that if one suffer all must suffer.—The bones and muscles are the parts on which motion most depends. There are 400 muscles in the body, each performing a specific duty. They assist the tendons in keeping the bones in their places, and put them into motion. Whether we run, walk, or sit, or stoop, bend the head, arm or leg, or chew food, we may be said to open and shut a number of hinges, or ball and socket joints. It is a provision of nature that, to a certain extent, the more the muscles are exercised, the stronger do they become; hence mechanics, laborers, farmers and others, are stronger and more muscular than those whose lives are passed in easy, light, and professional duties. Besides strengthening the limbs, muscular exercise has a most beneficial influence on the circulation of the blood and on respiration. The larger blood vessels are generally placed deep among the muscles, consequently when the latter are put into motion, the blood is driven through the arteries and veins with much greater rapidity than when there is no exercise; it is more completely purified, as the action of the insensible perspiration is promoted, which relieves the blood of many matters taken up in its passage through the system, and thus diffuses a feeling of lightness and cheerfulness over body and mind.

Recreation should be taken which will exercise all the muscles. Most of our city employments compel the workers to stand or sit in unnatural positions, using only a few of their muscles, while the others remain comparatively inactive. Tailors, sawyers, shoemakers, engravers, watchmakers and many others, such as cotton spinners, dressmakers, present either awkward movements in limbs or eyes, or are sickly or sallow looking.—Such parties are commonly affected with indigestion, giddiness, headache, or diarrhoea. Merchants, store-keepers, lawyers, writers, &c., pass weeks without exercise in the open air, and when opportunity offers, they have lost the inclination. These parties suffer from indigestion, costiveness, cancer of stomach, and stagnant circulation of the blood and all its attendant maladies. Now there is no remedy for the evils referred to, but taking advantage of the summer, and enjoying as much bodily exercise and out-door recreation as possible. It is quite a mistake to consider the labor of the day as equivalent to exercise. Work, of any kind, is a mere routine process, carried on with but little variety of circumstance, and a mere change of scene and air is beneficial. To derive the greatest amount of benefit from exercise it should be combined with amusement, and thus a botanic and rural hunt is both pleasurable and recreative. If this important fact was borne in mind by parents, teachers and employers, much fewer would be the victims to licentiousness, drunkenness and disease.

Athletic sports and out of door exercise, of every description, are no less conducive to the morals, and happiness, than they are necessary to the perfect health of the young of both sexes. Wherever there is physical depression, there *must* be a disposition to resort to mental, moral, or injurious physical stimulants. We wish we could say of the American youth, what Goldsmith, in his "Deserted Village," said of the youth of his native place:

"How often have I blessed the coming day,
When toil remittant lent its turn to play;
And all the village train, from labor free,
Set up their sports beneath the spreading tree;
Still many a pastime erected in the shade,
The young contending, as the old surveyed."

But we cannot expect this for the youth of our day and country; we must allow the dull machinery of acquisition, without a wholesome pause of joyous check, to go on year after year, paralyzing the limbs cramping the natural energies, deadening the affections, and darkening the happiness of our toiling citizens. This is the real cause why every city is a pasture field for a host of gamblers, groggeries, prostitutes, and quack doctors!—*Farmer and Mechanic.*

MUD HOUSES.

A late number of the *Maine Farmer* has an interesting editorial upon the subject of the construction of mud houses. He speaks of the bricks for the walls as being fifteen inches long, one foot wide and six inches deep, and composed of clay and sand. We have no doubt that houses may be made cheap and durable of such materials, but allude to the article to say that we have seen houses constructed of common soil, where it was of a clayey tendency, erected by preparing a strong plank mould the length of a side or end, resting its edges upon the ground and filling it with the surface soil in its immediate neighborhood. This was moistened, pounded thoroughly and left a day or two to dry, while another mould was filled for another part of the building, and in this manner the walls were raised. How the corners were dovetailed or connected with each other, we do not know. One or two of the houses constructed in this manner were recently standing, and probably are now, and have been occupied and made a fine appearance for nearly twenty years.

Why do not our people build more of stone!—This material is excellent and in abundance over most of New England, and properly laid up would last for several generations with trifling repairs compared with those required by wood. All kinds of lumber are becoming scarce and high, and we hope more attention will be turned to the importance of erecting our dwellings and barns of stone. In proper architectural proportions they look well—far better than the glaring white which so universally prevails. Buildings in the country look better constructed of small stones than of large blocks, and where large stones are used, uncult is more pleasant to our eye than cut, excepting the usual dressing at the corners. Will brother *Holmes* give the world a jog in this matter!

THE PLAIN WHY AND BECAUSE.

Why do birds fly! Because they have the largest bones of all animals, in proportion to their weight; and their bones are more hollow than those of animals that do not fly. Air vessels, also, enable them to blow out the hollow parts of their bodies, when they wish to make their descent slower, rise more swiftly or float in the air. The muscles that move the wings of birds downward, in many instances, are a sixth part of the weight of the whole body; whereas, those of a man are not in proportion one-hundredth part so.

Why have all animals more or less fat! Because it may serve as a store of nourishment; being most abundant when the animal is well furnished with a copious supply of food, and gradually diminishing in quantity as the food become scarcer, and disappearing when, from want, a lingering death has been produced.—*Fleming's Zoology.*

Why does the scorpion carry its young on the back! Because they are there protected and defended by the tail, at the extremity of which is the sting. Scorpions have frequent battles with ants, which may sometimes be seen dragging from the field one of their vanquished foes.—*Dr Scott.*

Why are scorpions killed by covering them with oil! Because their respiration is thus prevented.

Why have birds that do not fly, wings! Because they assist in balancing the body as they run.

Why is a blue flame so often seen upon the surface of a charcoal fire! Because the combustion of the carbonic oxide is formed in this way; the air entering at bottom, forms carbonic acid, which passing through the red hot charcoal, becomes converted into carbonic oxide. Hence arises the danger of burning charcoal in ill-ventilated chambers.

THE SHIP OF DEATH.

We believe it is some German poet who, walking "silent and thoughtful by the solemn shore of the vast ocean we must sail so soon," thus speaks of "*The Ship of Death.*"

By the shore of Time now lying,
On the ink flood beneath,
Patiently, thou Soul undying,
Waits for thee the Ship of Death!

He who on that vessel starteth,
Sailing from the sons of men,
To the friends from whom he parteth,
Never more returns again!

From her mast no flag is flying,
To denote from whence she came;
She is known unto the dying—
Asrael is her captain's name.

Not a word was ever spoken,
On that dark, unfathomed sea;
Silence there is so unbroken,
She herself seems not to be.

Silent thus, in darkness lonely,
Doth the Soul put forth alone,
While the wings of angels only
Waft her to a Land Unknown.

THRESHING MACHINE.—A new threshing machine is said to have been invented by a Mr. Palmer, of N. Carolina, which, with four men to feed it, will take a hundred cart loads of wheat in the morning, lying in the sheaf, pass it through the thresher, separate every kernel from the straw, winnow, clean, and put into bags 1500 bushels before sunset.

For the New England Farmer.

TALL PUMPKIN VINE.

MESSRS. EDITORS:—In the Sept. number of the *Farmer*, "Mount Grace" gives us a pretty tall specimen of rye, which will be hard to beat. I would say to Mount Grace and the rest of mankind, that I have a pumpkin vine, that has twenty-one (21) pumpkins on it, 17 of them perfectly ripe, yellow as any California gold. Many individuals have examined the vine and pumpkins, and have invariably pronounced it the greatest yield they have ever seen. If any one can beat this, let us hear from them. If Mount Grace will call this way about Thanksgiving time, we will give him an opportunity to test the quality of these pumpkins. We have had a dry season; much of our vegetation has suffered for the want of rain. I have nearly 1-2 an acre that is cultivated as a garden; it is all worked deep, some of it on the trenching system to nearly three feet deep; *this has not suffered in the least*; other portions of it have been affected in proportion to the depth the soil was worked. ANSEL HOLMAN.

Slatersville, Sept. 11, 1852.

REMARKS.—We have taken the liberty to underscore a few words in the above communication, in order to give emphasis to the fact expressed.

For the New England Farmer.

SWALLOWS.

GENTLEMEN:—I see by a notice in the *New England Farmer*, that you wish for information as to the time of the migration of the common barn swallow. In answer to which, I would state, that swallows, in considerable numbers, have been seen here every day up to the 2d of Sept., since which time none have been seen.

Some of my neighbors, who are somewhat noted as being great observers of "times and seasons," say that the common barn swallow seldom, if ever, leave here until about the 25th or 30th of August.

Perhaps you may say that it is not the common barn swallow; I should tell you that I am not mistaken, for I know a barn swallow, from any other, as well as I know a Robin Redbreast from a Blue Jay.

Yours respectfully, JOSEPH HADLEY.
Chester, Vt., Sept. 13, 1852.

REMARKS.—Thank you, friend HADLEY; we shall "make a note" of your statement, and by and by, when the attention of more persons in the country is turned to the subject, we shall find out the habits of these interesting birds to a certainty.—But is it not singular that no swallows of any kind have been seen in this region for several weeks, and that they should be found in numbers so much farther north?

THE TANNERIES OF THE UNITED STATES.—The total number of establishments in the United States is 6,263; capital invested, \$18,900,557; value of hides prepared, \$5,128,970; skins \$2,653,865;—value of raw material, \$19,623,237; number of hands employed, 20,909 male, and 102 females; monthly wages, \$416,214 to males and \$700 to

females; number of skins produced, 2,653,865; sides of leather, 12,257,940; aggregate value of annual products, 32,861,796. There are about 6,000,000 sheep, goat, and other small skins tanned and dressed annually, which are not included in the above. Of the various States, New York has the largest amount of capital invested, and Pennsylvania next. The products of these two States are also the largest.

For the New England Farmer.

THE POTATO ROT.

FRIEND BROWN:—Early in September, our friend, JOSEPH T. GILMAN, Esq., of this town, dug about one hundred and fifty bushels of as fine-looking Chenango potatoes as I ever saw, and put them into his cellar. I examined them carefully in the field, while they lay in the rows after they were dug, and there was no indication of disease. To-day, I have again seen them, as he is removing them from the cellar, and a considerable portion, perhaps a quarter, are affected with the rot, and many of them soft.

They were planted early, on rather dry, sandy land, in a rich old field, which was planted with corn last year, a part manured in the hill with guano and plaster, and the rest with plaster alone. No other manure was applied to the land. They were dug on a warm day, and put dry into a dry, cool cellar. I think he will lose the most of them.—Some Nova Scotia Bluenoses, in the same cellar, are also slightly affected. I understand that the rot has also been noticed in the potatoes on the farm of Mrs. Norris, of this place. It is well to keep the record of these facts, especially of cases so marked as that of Mr. Gilman's crop. I have heard of no other instance of the disease here.

Yours truly, HENRY F. FRENCH.
Exeter, N. H., Sept. 20, 1852.

WOOL—THE CLIP OF 1852.

The *Ohio State Journal*, published at Columbus, says the wool clip in that State is much less than last year, owing to the hard winter and neglect of sheltering sheep. Wool has sold there for six cents per pound less than last year. It adds:

"It is now ascertained that the clip throughout the whole country is much less than last year. It amounted, then, to about 52,000,000 pounds.—This year it will fall six or seven millions short. This deficiency is partly attributable to the hard winter, and partly to the fact that the farmers are selling more sheep to the butchers. This deficiency has caused a rapid rise in the price of wool in the Eastern markets. Sales in New York from 35 to 45 cents, and not much fleece can be bought for less than 40 cents.

"The wool produced this year is less than our manufacturers need, and the balance will have to be imported. This shows there is still room for extension in the wool growing business."

☞ The Annual Fair of the Hillsborough, N. H., Agricultural and Mechanical Society is to be held at Nashua on the 29th and 30th of this month.

☞ Several valuable communications on hand shall receive attention.

MASS. HORTICULTURAL SOCIETY'S EXHIBITION.

The annual exhibition of the Massachusetts Horticultural Society opened in the Public Garden on Tuesday, and continued till Thursday night. The display took place under Wright's mammoth tent, and was probably the finest exhibition of fruits and vegetables ever witnessed in this country. The collection of pears was one of the most remarkable sights in the pomological line we ever beheld. Marshall P. Wilder, of Dorchester, had 260 varieties; R. Manning, of Salem, 167; S. Walker, of Roxbury, 137; Hovey & Co., 150; B. V. French, of Braintree, 160. The last named gentleman also had 180 varieties of apples. There were likewise many noble specimens of peaches, plums, grapes, &c. The display of vegetables was also very attractive. Mrs. S. W. Cole, of Chelsea, exhibited 50 varieties of seedling potatoes, which attracted much attention. Mammoth squashes, melons, beets, parsnips, potatoes, cabbages, &c., were in abundance. The floral collection was not very extensive, but included many rare and choice flowers, and the bouquets and flower-pieces with which the tables were decorated, added much to the beauty of the scene. The members of the Horticultural Society could not but have felt proud of their exhibition, and all who witnessed the display must henceforth cherish a deeper respect for the noble art to whose advancement the Society is devoted.

Mechanics' Department, Arts, &c.

INGENIOUS PIECE OF MECHANISM.

A small machine of recent invention has been lately put in operation in this city, for the manufacture of wire chain, such as is used on fluid lamps, to fasten the extinguishers to the tubes.—There have been, heretofore, machines for cutting and forming the links, and the merit of this invention consists in uniting these machines so as to work in connection, and in the addition of an entirely new and original contrivance for locking and setting the links together, thus forming a continuous chain within the machine. This latter process was formerly performed by hand.

The machinery is exceedingly complicated, and the casual observer would perceive nothing in the collection of gears, cams, wheels, &c., before him that indicated an adaptation of parts or unanimity of purpose. When in motion it is even more difficult to form the slightest conception of the object of its construction. It appears like a mass of springs, knives, rollers and followers, all flying with utmost rapidity, and so intricately arranged that even an experienced eye is somewhat baffled to detect any concert in the action of the parts. The wire enters, and then we see the accuracy and precision of the inventor's calculations. It is clipped the requisite length, it is then passed on and formed; one end is set up closely, the other remaining open like a hook, then passing on it is hooked on the end of the chain, closely followed

by another, and another, with such rapidity as to astonish the observer and make him doubt the reality of the scene before him. This highly ingenious machine is so compact as to be contained in a case no larger than a lady's work-box, which case has two apertures, one for the admission of the wire, the other for the passage of the chain, which is made, when the machine is at its highest speed, at the rate of a yard per minute, but its ordinary working rate is about thirty yards per hour. There are about 150 links in one yard, and it is easy to conceive of the skill and ingenuity of the inventor, and the nicety of adjustment in the machine, when it is stated that the machine will run for days and weeks without malforming one link or causing a single break in the machine. As yet the machine is kept secret, none having been allowed to see it but a few friends of the inventor; and no patent has yet been obtained, though one will doubtless be taken out at some future day.—*Boston Journal.*

ANOTHER INVENTION FOR VENTILATING RAIL-ROAD CARS.

The *New Haven Courier* gives the following description of another invention designed to promote the comfort of passengers travelling by rail-road:

"The invention is a very simple one, and consists merely in a connection formed between all the cars by enclosing the platforms, so that the external air, with the dust, smoke and cinders, are entirely excluded from the usual ways of ingress. The front of the baggage car is open, but protected from the smoke of the locomotive by a screen. The air rushes in through the front of the car, and circulates freely through the whole length of the train, keeping up at all times a gentle motion of the air, without the possibility of annoyance from dust, &c. The passengers on the train were all delighted with its operation. It has this advantage over Mr. Paine's recently invented ventilator, that when the air is at rest, the passengers have the free use of the ordinary means of ventilation by doors and windows, and thus the intolerable heat is avoided, while there is no fear of the admission of smoke, which forces itself into Paine's ventilators when passing under bridges, or on a wet day, when the wind is dead a-head, and rolls it along the roof."

OIL TEST.

We were invited a few days since to examine a curious machine, called an Oil Test. The inventor claims that by this instrument he can determine precisely the quality of any description of oil. That it will show precisely the different degrees of tenacity, and in what manner different oils lessen friction, or in other words, what the lubricating qualities of any oils may be. Thus if one kind of oil submitted to this test shows a tenacity of twenty, as indicated by the machine; and another is found to be forty, it is very evident that one of these oils contains twice as much superfluous matter as the other; and also that the tenacity of the former is but one half of the latter, and considerably lessens friction in the same proportion.

This invention is now in the possession of and made only by Mr. Daniel A. Craig, an industrious and ingenious machinist, who has taken steps to secure a patent right for it, when he will imme-

diately commence the manufacture of the machines, for sale. We think it will secure the attention of manufacturers and others who consume large quantities of oil, the quality of which they cannot easily determine until it has been used for some time.—*Traveller.*

THE ELECTRIC BALL.—An electric ball is to be put up on a prominent spot on South Foreland Point, near Dover, Eng., which will act simultaneously with the electric clocks at the Greenwich Observatory. The falling of this ball, and the simultaneous firing of a gun by electricity, will enable all vessels within ten miles, and those in the Downs, to regulate their chronometers to a second.

REDUCTION OF THE HOURS OF LABOR.—The Lowell Machine Shop, as well as the machine shops at Lawrence, Manchester, Biddeford and Holyoke, have reduced the hours of labor to 11 per day for the workmen in their employ.

DEATH OF AN INVENTOR.—William Howe, of Springfield, the inventor of the celebrated bridge for railroads, which bears his name, and which has been brought into extensive use in nearly all parts of the country, died in Springfield on Sunday. His invention was a source of great wealth to him.

☞ The shoe business in Lynn during the past year has excelled in activity the enterprise of many preceding years, and the demand promises well for the future

Ladies' Department.

POOR, ABUSED WOMAN.

Women have been called the martyr sex. They certainly do serve a hard master, to whose tortures they submit even cheerfully; in this, we suppose, showing their martyr spirit. Sometimes, by this tyrant, they are compelled to wear shoes so very small as to painfully cramp the feet, and again, of so thin a texture as to subject them to colds, consumption and death! Again this ingenious torture takes another form, and women are seen with enormous burdens on their backs, while they are at the same time dragged to the earth by numerous heavy encasements of wool or cotton. At other times they are subjected to agonizing pressure about the waist by "infernal machines," called corsets. Often they call forth the sympathies of all beholders, as they pick their weary way through the muddy streets, with bedraggled skirts, whose length the tyrant prescribes, flapping uncomfortably against their heels. And as if all this were not enough, their pretty faces,—which every body knows is the nature of woman *not* to thrust brazenly forth to the gaze of the crowd,—together with a large portion of the head, are left exposed to glaring sun, and staring eyes, by an abbreviation, which, in derision of its short comings, we suppose, is called a bonnet! And yet how cheerfully, with what alacrity, even, does woman submit to these painful exactions.

That this monster, who torments the better half of creation, may be held up to the execration it deserves, we shall publish its name. It is—**FASHION!**

Will the next Woman's Convention take this subject into consideration?—*Portland Transcript.*

DOMESTIC RECIPES.

GINGERBREAD, No. 1.—One pound of sugar, one pound of butter, three pounds of flour, two table spoonfuls of ginger, one gill of cream, one pint of molasses. Rub the butter in the flour; add the other ingredients. Roll out the dough, cut it into cakes, place them on buttered tins, and bake in a moderately cool oven. Wash the cakes over with molasses and water before you bake them.

GINGERBREAD, No. 2.—Half a pound of sugar, half a pound of butter, one pound and a half of flour, one ounce of ginger, one pint of molasses. Rub the flour and butter well together, add the other ingredients. Roll out the dough, cut it in cakes, place them on tins, wash them over with molasses and water and bake them in a moderate oven.

BOSTON GINGERBREAD.—Three cups of flour, one cup of butter, one cup of molasses, two eggs, one table spoonful of dissolved salaratus, two large table spoonfuls of ginger, one table spoonful of cinnamon, milk enough to form a dough. Rub the butter and flour together, and add the other ingredients. Roll it out in sheets, cut thin, butter your tins, place them, and wash the cakes over with molasses and water before they are put in the oven. They require a very moderate heat to bake them, as they easily scorch.

COMMON GINGERBREAD.—Half a pound of butter, half a cupful of ginger, one pint of molasses, two pounds of flour, one table spoonful of salaratus. Rub the flour and butter together and add the other ingredients together. Knead the dough well. Roll it out, cut it in cakes, wash them over with molasses and water, and bake them in a moderate oven.

PLAIN GINGERBREAD.—Three pounds of flour, a quarter of a pound of sugar, half an ounce of ground ginger, half a pound of butter, molasses sufficient to moisten the flour. Cut up the butter in the flour, add to it the sugar and ginger, and stir in molasses barely enough to moisten the flour, as it will become softer by kneading. Knead the dough well, roll it out in sheets, cut it in cakes, place them on tins, wash then over with molasses and water, and bake in a cool oven.—*National Cook Book.*

A PSALM FOR THE SORROWING.

Gay wanderer in a homeless world,
Poor pilgrim to a dusty bier;
On Time's great cycle darkly hurled
From year to year;
See in the sky these words unfurled—
"Thy home is here!"
Pale mourner, whose quick tears reveal
Thy weight of sorrow but begun—
Not long thy burdened soul shall reel
Beneath the sun,—
A few swift circles of the wheel.
And all is done.

Though galled with fetters ye have lain,
To vulture hopes and fears a prey,
O, morn not o'er your ceaseless pain,
Or slow decay;
For know, the soul thus flies its chain
And breaks away.

T. B. REED.

Boy's Department.

THE DRUMMER-BOY OF WATERLOO.

When battle roused each warlike band,
And carnage loud the trumpet blew,
Young Edwin left his native land,
A drummer-boy for Waterloo.

Then he that knew no infant fears,
His knapsack o'er his shoulders threw,
And cried, "Dear mother, dry those tears,
'Till I return from Waterloo."

And when his mother's lips he pressed,
She bade her noble boy adieu;
With wringing hands, and aching breast,
Beheld him march for Waterloo.

He went, and ere the set of sun,
Beheld the foe, the arms subdued;
The flash of death, the murderer's gun,
That laid him low, at Waterloo.

"O, comrades, comrades!" Edwin cried—
And proudly beamed his eyes so blue—
"Go, tell dear mother, Edwin died
A soldier's death, at Waterloo!"

They placed his head upon his drum,
Beneath the moon's bright, mournful hue;
The night had stilled the battle hum—
They dug his grave at Waterloo!

HINT FOR YOUNG TOBACCO CHEWERS.

Some writer, who signs his name Peter Simple, tells the story of a sailor-boy who chewed tobacco, which contains a good hint for those who indulge in such a habit. We advise our young readers never to be guilty of this filthy practice; and if any one has been so unfortunate as to have already acquired the disgusting habit, to throw away the tobacco, clean out the mouth as soon as possible, and never defile it again by the use of such a weed. Here is the story.

I was amused the last morning watch that I kept. We were stowing away the hammocks in the quarter-deck nettings, when one of the boys came with his hammock on his shoulder, and as he passed, the first lieutenant perceived that he had a quid of tobacco in his mouth.

"What have you got there, my good lad? a gum-boil? Your cheek is much swollen."

"No, sir," replied the boy, "there is nothing at all the matter."

"O, there must be; perhaps it is a bad tooth. Open your mouth and let me see."

Very reluctantly the boy opened his mouth, which contained a large roll of tobacco leaf.

"I see, I see," said the lieutenant; "your mouth wants overhauling, and your teeth cleaning. I wish we had a dentist on board; but as we have not, I will operate as well as I can. Send the armorer up here with his tongues."

When the armorer made his appearance, the boy was compelled to open his mouth, while the tobacco was extracted with his rough instrument.

"There, now," said the lieutenant, "I'm sure that you must feel better already; you never could have any appetite with such stuff in your mouth. Now, captain of the afterguard, bring a piece of old canvass and some sand, and clean his teeth nicely."

The captain of the afterguard came forward, and, putting the boy's head between his knees,

scrubbed his teeth well with sand and canvas for two or three minutes.

"There, that will do," said the lieutenant. "Now, my little fellow, take some water and rinse out your mouth nice and clean, and you will enjoy your breakfast. It was impossible for you to have eaten anything with your mouth in such a nasty state. When it is dirty again, come to me and I will be your dentist."

Fishkill Landing Nursery.

2½ MILES NORTH FROM THE NEWBURGH FERRY.



The subscriber respectfully solicits the attention of Fruit Growers and dealers in Fruit Trees to his large stock, for sale this fall, consisting of 40,000 Apple Trees, of the most approved varieties, 6 to 10 feet high, and from \$12 to \$14 per hundred.

20,000 Pear Trees, embracing all the varieties in general cultivation, 5 to 8 feet high, 30 cts. each, \$25 per hundred, on Pear stocks. On Quinces the trees are very thrifty, and include, in addition to the leading standard sorts, many of the new varieties of recent introduction, which promise well.

30,000 Cherry Trees, two to three years old, of nearly all the popular kinds in cultivation.—Dwarf, on Mahaleb stocks, of the choicest varieties, can also be supplied, 6 to 12 feet high, \$20 to \$25 per hundred.

20,000 Plum Trees, of the most highly esteemed sorts, \$30 per hundred.—Trees thrifty, pretty, and of fine size.

A Large Stock of Apricot, mostly on Plum stocks, at \$30 on Plum, \$12½ on Peach, per hundred.

30,000 Peach Trees of the most valuable kind, standard varieties, one to two years growth on the inoculation, 7 cents each, \$6 per hundred. No peach pits are planted but from a district where the "Yellow" has not yet made its appearance.

The Stock of Isabella, and Catawba Grape Vines is very large, two and four years old, with fine roots; having been annually cut back, they are in fine condition for vineyard planting, \$10 to \$15 per hundred.

2,000 Quince Trees, mostly of the Apple variety: Currant and Raspberry bushes, Strawberry plants, Hybrid Perpetual and other Roses, &c.

40,000 Deciduous and Evergreen Ornamental Trees, suitable for Lawns and Avenues, many of which are of large size and fine form—among which are 10,000 Arborvita, 1½ to 5 feet high, \$12 to \$25 per hundred. (Not from the State of Maine.)

15,000 Balsam Fir, 1½ to 5 feet high, at from \$15 to \$20 per hundred—together with Norway Spruce, Native Spruce, Scotch, Austrian and Weymouth Pines, Junipers, Deodar Cedar, Cedar of Lebanon, English and Irish Yew, &c.

5,000 Red Cedars, of suitable size for screens.

10,000 Buckthorn, two years old, at from \$5 to \$8 per thousand.

The most highly prized varieties of the Apple, Peach, Pear, Plum, Apricot, Cherry, &c., which have recently originated in this country and Europe, have been procured as early as practicable, and tested, or are in the course of being tested, on the grounds of the proprietor. The new and rare Deciduous and Evergreen Ornamental Trees are annually imported, of which fine plants can be furnished. 4000 seedling Oaks and Elms, imported four years since, are among the Deciduous Trees, many of them very remarkable in their growth and appearance.

The Nursery is located within 2½ miles of the Hudson River Railroad Depot, at Fishkill Landing. Steamboats run daily to New York and Albany, from Newburgh.

Trees, &c., when ordered, will be taken up carefully, correctly labelled, packed in the best manner, forwarded agreeable to order, and with the least possible delay. Charges for packing made only to cover cost.

Catalogues sent in exchange for a letter stamp.

DANIEL BRINCKERHOFF.

Fishkill Landing, Oct. 2, 1851.

JOSEPH REYNOLDS, M. D.,

RESPECTFULLY offers his professional services to the citizens of CONCORD AND VICINITY. Dr. R. was formerly House Physician to the Massachusetts General Hospital, Boston, and for 20 years past has practiced the several branches of his profession in Gloucester, Mass.

Reference to L. V. BELL, M. D., Somerville.
J. V. C. SMITH, M. D., }
J. B. S. JACKSON, M. D., } Boston.
H. I. BOWDITCH, M. D., }

Concord, Mass., Sept. 25.

if

State Mutual Life Assurance Co. OF WORCESTER.

GUARANTEE CAPITAL, \$100,000.

Hon. JOHN DAVIS, President.
Hon. ISAAC DAVIS, Vice
Hon. STEPHEN SALISBURY, Presidents.

THIS Company was chartered in March, 1844, and commenced business on the first of June, 1845. Its business is conducted on the most economical principles.

The well considered and invariable policy of this Company has been to prefer the safety and mutuality of the assured to the showy advantages of a large number of policies, and an imposing amount of receipts. California risks have been uniformly declined, and the multiplication of policies in cities considered especially liable to cholera has not been encouraged.

The cash premiums of this company are calculated on the most approved tables of the probability of life, and at the low rates which are deemed safe.

Pamphlets, explaining the principles and advantages of life assurance, with forms of application and rates of premium, may be had by application at the Office of the Company in Worcester, or of the Agents in all the principal towns in New England.

CLARENDON HARRIS, Secretary.

Dec. 27, 1851.

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Mexican Guano.

A NEW ARTICLE is now offered to the Agriculturist and Dealers, under the above name, from its having been found near the Mexican coast. It has been analysed by C. T. Jackson, M. D., State Assayer, Boston, Dr. David Stewart, of Baltimore, and others. Dr. Stewart says it contains the largest proportion of Phosphates he has ever met with in Guano.

The following are the result of the analysis made by C. T. Jackson, M. D.:

Water.....	23.40
Vegetable Matter.....	15.80
Soluble Salts (in Water) Phos. Soda.....	0.12
Phosphates of Lime and Magnesia.....	60.60
Insoluble Matter (Silex).....	0.10

99.99

The quality of this Guano as a rich fertilizer, and the great reduction in price compared with the Peruvian, is such as to render it an object for the agriculturist and dealers to buy and give it a trial. It has been tried in the vicinity of Norfolk, Va., and much approved by the Farmers, those who are now buying and using of it freely. It may be obtained in lots to suit purchasers of A. D. WELD, 137 State Street, PHINEAS SPRAGUE & Co., T Wharf, or of P. A. STONE, who is the importer, and may be found at 15 Crescent Place, Boston, where also other information may be obtained respecting it. It is also for sale by Parker & White, 8 and 10 Gerrieh Block, Blackstone Street, D. Prouty & Co., 19 North Market Street.

March 27.

157

Pure Devon Stock.

COWS, HEIFERS, BULLS and BULL CALVES for sale.

Apply at Office of N. E. Farmer, or to the subscriber.

B. V. FRENCH,
Braintree, Mass.

1yr



Dec. 27, 1851.

Administrator's Sale.

By license of Court, must be and will be sold at Public Auction, without reserve, on SATURDAY, the 9th day of October next, at 1 o'clock, P. M., the well-known and valuable Farm of Moses Chapin, late of Grafton, deceased, situated about one mile from Grafton Common, on the great road leading from said Common to Mendon, containing 83 acres of land, in suitable sized lots, enclosed with good strong wall, and on a hill where the air is pure, water good, and location most beautiful.

The buildings are large and convenient, and the soil second to no other in the county, and the place one of the most desirable for a capitalist who wishes to retire on an elevation of land overlooking the surrounding country.

For further particulars, all are invited to examine for themselves previous to the day of sale, as it will be sold within a few minutes of the above named time, storm or sunshine.

Reference to Hon. Samuel Wood, at the Custom House, Boston, Isaac H. Southwick, Superintendent of the Prov. & Wor. Railroad, at Providence, or to any person in said town of Grafton, or vicinity.

Grafton, Sept. 11, 1852.

5w*1

Administrator.

The Farmers' Library.

JUST RECEIVED, the following assortment of Agricultural and Horticultural Books, embracing the standard works of eminent American and European writers, on the Farm, the Orchard, the Garden, &c. &c.

	PRICE.
American Farm Book, by Allen,	\$1.00
Farmer's Treasure, by Faulkner and Smith,	.75
Dana's Muck Manual,	1.00
Prize Essay on Manures, by Dana,	.25
American Muck Book, by Browne,	1.00
Lectures on Practical Agriculture, by Johnstone,	.75
Elements of Scientific Agriculture, by Norton,	.50
Principles of Agriculture, by Thaeer,	2.50
Practical Agriculture, by Johnstone,	.75
Agriculture for Schools, by Blake,	1.00
Catechism of Agriculture and Chemistry, by Johnstone and Norton,	.25
American Agriculturist, by Allen,	1.00
Liebig's Complete Work on Chemistry,	1.00
Farmer's and Emigrant's Hand Book, by Marshall,	.75
Home for all, by Fowler,	.50
Book of the Farm, by Stephens and Skinner,	4.00
Cottage and Farm Houses, by Downing,	2.00
Downing's Country Houses,	4.00
Rural Architecture, by Allen,	1.25
Downing's Landscape Gardening and Rural Architecture,	3.50
Downing's Cottage Residences,	2.00
Fruit Garden, by Barry,	1.25
Complete Gardener and Farmer, by Fessenden,	1.25
Bridgeman's Gardener's Assistant,	2.00
Bridgeman's Kitchen Gardener's Instructor,	.50
American Fruit Culturist, by Thomas,	1.00
Gardener and Complete Florist,	.25
Florist's Guide, by Bridgeman,	.50
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Youatt and Martin on Cattle, by Stevens,	1.25
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Johnson's Gardener's Dictionary, by Landreth,	1.50
Rural Economy, by Bousisingault,	1.00
American Rose Culturist,	.25
Bigelow's Plants of Boston,	1.25
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Hive and Honey Bee, by Richardson,	.25
Bee Keeper's Manual, by Miner,	.50
Bird Fancier, by Browne, paper 25 cents,	.50
Townley on Bees,	.50
American Poultry Yard, by Browne,	1.00
American Poulterers' Companion, by Bement,	1.00
American Fowl Breeder, by Moore,	.25
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Hints to Sportsmen, by Lewis,	1.25
Dadd's Anatomy and Physiology of the Horse,	1.00
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Management of Sheep, by Canfield,	1.00
Youatt on the Pig,	.60
Knowlson's Complete Cow Doctor,	.25
Horse Doctor,	.25
Guenon's Treatise on Milch Cows,	.88
Treatise on Hot Houses, by Leuchars,	1.00
Allen on the Grape,	1.00
Loudon's Encyclopaedia,	10.00
Schenck's Text Book,	.60
Breck's Book of Flowers,	.75
Downing's Fruit and Fruit Trees,	1.50
For sale at the Publishers' prices by RUGGLES, Nourse	
MASON & Co., Quincy Hall, (over the Market,) Boston.	
April 3, 1852.	157

Garden Seeds.

WE respectfully solicit the attention of purchasers of GARDEN SEEDS to our extensive stock, which we offer for sale. We have all the sorts of Vegetable Seeds that have proved worthy of cultivation; also, Grain, Grass and Flower Seeds. All the varieties are raised and selected expressly for our trade, and we do with confidence recommend them to all who desire to procure seeds that will prove true to their names.

Catalogues gratis, on application.

RUGGLES, Nourse, MASON & CO.,
Over Quincy Market, Boston.

Jan. 1.

Bound Volumes.

BACK VOLUMES of the NEW ENGLAND FARMER, elegantly bound in Muslin, Gilt and Embossed, are now for sale at this office.

Boston, March 20, 1852

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Farm for Sale.



For sale a farm and country residence, situated in the town of BURLINGTON, 14 miles from the Woburn Centre Depot, and 12 miles from Boston. Said farm consists of 50 acres of land, divided into Tillage and Orchards. The annual produce of Apples is 150 barrels. There are two Peach Orchards, of 75 trees each; the oldest is in full bearing, the other just coming into bearing. There is also an orchard containing 250 Dwarf Pear, in bearing, set out three years since, and selected with great care. The buildings consist of a dwelling-house, and two barns, with the necessary sheds and out-buildings, all of which are in perfect repair. One of the barns is a large one, with cellar under it. The farm is level, and easy of cultivation; the house is delightfully situated on a rise of land, and overlooks the farm.

For terms and particulars, apply on the premises, or by mail to
JOHN H. DANE.
Sept. 25, 1882.

Ayrshire Bull.



For sale, a full-blooded AYRSHIRE BULL, 6 years old, (warranted pure,) of the best stock, and for beauty of form and breeding properties equal to any in the country.

For price and further particulars enquire at the office of the New England Farmer.
Burlington, Sept. 11, 1882.

NEW ENGLAND FARMER

Is published on the first of every month, by JOHN RAYNOLDS and JOSEPH NOURSE, at Quincy Hall, South Market St., Boston.

SIMON BROWN, Editor.

FREDERICK HOLBROOK, } Associate
HENRY F. FRENCH, } Editors.

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An Independent Agricultural Family Newspaper.

The News and Miscellaneous departments under the charge of WILLIAM SIMONDS, will include a full and careful report of the news of the Markets, and the news of the week, such as Domestic, Foreign and Marine Intelligence, Congressional and Legislative proceedings, Temperance and Religious Intelligence, and a general variety of Literary and Miscellaneous matter, adapted to family reading, comprising more useful and valuable reading matter than any other Agricultural Newspaper published in New England. Everything of a hurtful or even doubtful tendency will be carefully excluded from its columns.

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The monthly contains nearly the same matter as the Agricultural department of the weekly.

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Over 300 " " " " " "	15 " "
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Over 2000 " " " " " "	25 " "
Over 4000 " " " " " "	30 " "

To prevent any misunderstanding, we quote the 16th section of the law of 3d March, 1845, which is as follows:

Sec. 16. And be it further enacted, that the term "Newspaper," herein before used, shall be, and the same is hereby defined to be, any printed publication, issued in numbers consisting of not more than two sheets, and published at short stated intervals of not more than one month, conveying intelligence of passing events, and bona fide extras and supplements of such publication.

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NO. 11.

RAYNOLDS & NOURSE, PROPRIETORS.
OFFICE...QUINCY HALL.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

THE FARM IN NOVEMBER.

"And, when NOVEMBER came, there fell
Another flitting in, to tell
The month's employment; which we see
Providence was, for time to be."

Silently, stage after stage, the seasons roll along. The full flush of summer has yielded its tribute to our cares and passed away. The first stages of autumn have come and touched with gentle hand the grass of the field, the leaves of the trees, and all that lately was so vigorous and gay. This month closes the harvest of the farm, and is peculiarly the season of ripeness. The grass, the grain, the fruits and the Indian corn have been gathered, but some of the vegetable productions capable of resisting the frosts for a season still remain to be collected. Nature gives forth her bounties according to our wants, and at that period when it becomes necessary to lay them up for future supply. The inquiring mind will not fail to perceive that the ripening of corn and of various fruits immediately precede the sterility of winter, that man may hoard in his store-houses whatever is necessary during the unproductive season, for his own subsistence and that of the animals he domesticates for his use.

As the season advances, its character changes. At first there is an exhilarating softness in the air; the sky is bright and blue; the flocks graze on the hills, and cattle ruminant on the shaded woodlands. Then, here and there, a tree sheds its leaves, disclosing the summer homes of the birds, and we are glad to see how near they have been to us. But towards the close of autumn a deeper sentiment occupies the mind. Warmth and brightness gradually diminish; night slowly steals on the day; the atmosphere becomes chilled, and leaves assume an endless variety of hues, thus presenting beauties even in their decay; the pastures have a darker hue, and the woods, although their varied and harmonizing tints are inexpressibly beautiful, speak also of decay; and the sober stillness of an autumnal sky sheds a gentle sadness

over the scene. Then follows blustering winds, snow flakes, pinching frosts and pelting storms.

The more pressing and active duties of the farm are over for the year. Other duties there are, and important ones, as there will ever be; but as there is a time for all things, so the farmer's season of repose, of quiet reading and contemplation approaches, when he will gather around him the recorded wisdom of others, or, perchance, record his own, or mingle in grateful leisure, in the amenities and kindly charities of life.

Now the busy flail will be in full employment and fill the air about the homestead with a pleasant sound, and invite all the passers by to look in at the great open barn doors; while outside the poultry scratch for food among the straw, and the cattle ruminant beside the hay-rack, or lean with inquiring faces over the gate.

Some November days are devoted to felling the timber and piling the wood, ready for the sled in winter months. Others, to an examination of the cellar, throwing out the rubbish, and rendering that depository clean and sweet, so that no unwholesome gases shall penetrate the rooms above.

DRAINS will be examined and put in order, that they shall carry off waste water when the Winter King has set his seal upon the earth, and no skill of the farmer can unseal it.

AQUEDUCTS must be repaired, that the winter's supply of water shall not fail. Where a full, free stream is flowing, there is less danger of its freezing.

PUMPS put in order now are protected by boxes filled with hay, tan, or wrapped in old woollens, will work well when those neglected will fail to help you fill the tea-kettle in a frosty morning.

POINT, with mortar, about the underpinning of the house and barn. It is difficult to keep warm rooms where the wind sweeps under any portion of the house. It works its way up between the ceilings, and makes double the fuel necessary to secure a comfortable degree of warmth.

BE KIND TO THE STOCK.—It is much less labor to take care of animals that are docile and quiet, than those that are uneasy and fractious. *They will soon catch the spirit of your own temper.* If your words and actions are kind and gentle, they will come to their places with confidence and allow you to handle them pretty much as you please. Taken from green, succulent food, and fed mostly upon hay, they need an occasional feed of pumpkins or roots, to break them off gradually, and accustom them to their winter fodder.

FATTING HOGS.—If kept in a proper place the temperature of November is favorable for fattening hogs. Give them a dry, warm place, feed often on warm food, and they will lay on flesh and fat from one to two pounds a day. When this is done, it is profitable for us to raise pork.

SHEEP.—These animals do not dislike even severe cold weather, provided they are under cover where they can keep themselves dry. They should be allowed to go at will into the barn or close sheds, or into the yard. While having the care of sheep through several winters, we observed that in clear dry nights, they usually remained in the yard during the coldest weather, and they were always healthy; while in damp, or rainy weather, although it might be quite warm, they preferred being under cover.

APPLE, PEAR, PLUM, CHERRY AND QUINCE trees may be planted in this month; so may Currants, Gooseberry and Raspberry shrubs. Trim and tie up to the stakes or trellis work the Raspberries of last summer's growth, cutting out all the old wood, and shortening the vigorous growth of the young shoots.

SEEDLINGS AND CUTTINGS should be protected by a coating of compost, or some light substance, such as leaves, hay, straw or shavings; but perhaps clear earth would be better, though we never have known mice attack such small plants.

PRUNING.—All hardy trees may be pruned this month, if the season is not very frosty. It is much safer to prune the apple tree now than in March or April. Bank them up as mentioned in last month's calendar.

And though mentioned last, it is not the last among every good man's duties in November to

REMEMBER THE POOR.—Some, whose crusty hearts hug the world with a grim which death only can unloose, declare that the *ant* springs from a lack of wit or wisdom. That is *their* way of excusing the conscience, but not that of the *good farmer*. He visits the widow and the fatherless *now*, and give them a start in preparing for cold weather; find them employment and aid them in every way to fill the cruse and the barrel, and make their hearts glad,

"While chill November's surly blast
Lays fields and forests bare."

Now the farmer finishes all his out-of-door work

before the severe frosts set in, and lays by his implements till the awakening of spring calls him to his hand labor again.

For the New England Farmer.

CROPS—PINE SHAVINGS.

MR. BROWN:—As the falling leaves and the hoar frosts of autumn remind us that the labors of the husbandman are nearly closed for the present season, it becomes us with thankfulness to recount the blessings of the past, and while we secure the rich products of earth for our future wants, to provide something to return to the soil, thereby increasing its fertility. (a.)

The crops in this vicinity on the whole are very good. In consequence of the severe drought the hay crop was light, and fears were entertained that the earth would not yield her increase; but through the blessing of a bountiful Providence we have a good yield of corn, an excellent crop of sound potatoes and an abundance of apples.

But my principal object in this communication is to inquire if pine shavings, used as litter for horses and cows, are any advantage to the soil. I have a piece of moist heavy land which I wish to improve, and an abundance of shavings almost as fine as sawdust can be obtained at a planing mill near by. As some have expressed fears that *pine* would injure the soil, I wish to know your opinion.

(b.)

Respectfully Yours,

J. O. TASKER.

Pittsfield, N. H., Oct. 15, 1852.

REMARKS.—(a.) The spirit of thankfulness expressed above becomes us all. Let such feelings pervade the heart, and the world becomes to us a better, and a happier one.

(b.) We have no doubt that the pine shavings will be useful on your "moist, heavy land." They will be more valuable if you bring them into a state of fermentation before they are applied. It is stated in Browne's muck-book that mere woody fibre, in all cases, seems to require fermentation or charring to render it nutritious to plants. Shavings of wood, fine chips, saw-dust, the young shoots of trees and shrubs, usually require as much dung, or vegetable refuse, to bring them into a state of fermentation, as the most obstinate kinds of peat. They can be much sooner decomposed by the action of caustic lime than by the process of fermentation, as they may be speedily converted into manure by being laid in a pit with alternate layers of lime.

We would recommend experiments, by spreading the clear shavings, a few each year, upon certain square rods of the land. Then upon another parcel those decomposed by the lime, and upon a third those fermented and decomposed by mixture with the barn manure. And your report to us when the experiments are made we shall consider a fair offset for these brief "remarks."

There are three sorts of friends—your friends who like you, your friends who do not care for you, and your friends who hate you.

EULOGIUM ON THE LATE A. J. DOWNING.

Pronounced before the Pomological Congress at Philadelphia, September 13th, 1852.

BY HON. MARSHALL P. WILDER.

The annual return of the 28th of July will moisten the eyes and agonize the hearts of many American citizens.

On the morning of that disastrous day two steamers, the *Armenian* and the *Henry Clay*, with numerous passengers on board, start from the capital for the chief commercial port of the Empire State. Like "stately sailing swans" they glide swiftly over the smooth surface of the Hudson. The fire within them waxeth warm; their awful energies are roused; they run abreast—anon, the "bird of the West" darts ahead and distances her orient rival. She calls at her landings, swells the number of her passengers, and with fearful velocity bears them onward.

They admire the varied landscapes, the cottages, villas, towns, cities, bold cliffs, and mountains, which have given the scenery about this majestic river a world-wide renown.

They near a city, which rises in beauty and grace from its western bank back to the brow of the distant hill. There is a

"Cottage, half embowered
With modest jessamine, and there a spot
Of garden ground, where, ranged in neat array,
Grow countless sweets."

Its architecture is in the most approved Elizabethian style. Its grounds are tastefully laid out and adorned, and he who named it "Highland Gardens" accurately translated the natural language of the place. It overlooks the city and the river, and commands a view of one of the most extensive and beautiful landscapes in the world. The very site seems designed by nature for the birth-place of genius, and for the abode of comfort, taste and learning.

Its proprietor, with his relatives and friends, six in all, take passage in the ill-fated boat. She bears them on toward their port of destination, when suddenly the alarm of fire rings like a death knell through that floating sepulchre. The passengers are ordered aft, and she is headed for the eastern shore. In a moment all is consternation and horror, which no language can describe, no painter's pencil sketch. Her whole centre is on fire. She strikes the bank two miles below the town of Yonkers. The wind envelops the multitude on her stern in smoke and flame. With a fearful odds in the chances of escape, the *Great Destroyer* offers them their choice between a death by flame, or a death by flood. Alas; on some he inflicts both; they are first burned and then drowned!

They are driven before the devouring element, and entrust themselves to the mercy of the waves. Amidst the crowd at the stern, stands a man of tall and slender habit and of thoughtful expression, whose penetrating eye surveys this perilous scene, and seeks the most favorable chance of escape. His accustomed self-possession fails him not in this awful extremity. He imparts wise counsels for personal preservation to his friends and those about him; then climbs to the upper deck for articles from the furniture of the boat, on which they may float to the shore. He returns, but his beloved wife and part of his company have

already been driven overboard. He commits the rest, and last of all himself, also to the fatal flood,

"Forlorn of hearts, and by severe decree
Compelled reluctant to the faithless sea."

They sink; they rise. With the grasp of death they cling to him and again submerge him and themselves in the waves. He brings them once more to the surface and beat for the shore. Alas! it is in vain; his efforts to save others peril his own life. Entangled, exhausted and disabled, he sinks to the watery grave.

But the partner of his life, her sister and brother, who were mercifully rescued from the jaws of death, are still unapprised of his melancholy fate, and search for him in vain among the agonized survivors. But the cry, she sinks! she sinks!! fills their ears with direful apprehensions. Still they cling to the delusive hope that he may be among those rescued by the rival *Armenian* and borne to the city of New York.

The object of this conjugal love returns to her desolate home. The tidings of this awful disaster fly upon the wings of the wind; the mystic wires tremble at the shock; the press utters its loud lament; the note of woe rings through our streets, fills our dwellings and convulses our hearts with grief. The nation mourns, minute guns are fired upon the spot to arouse the inhabitants of the surrounding country, and to start the dead from their lowly rest. Multitudes rush from every quarter to the mournful scene; they crowd around each body as it is raised and brought to the shore, to identify therein a relation or friend. Among them his brother and partner in business arrives. At length another body is raised. Its countenance is familiar; it is recognized; and at length the melancholy announcement is made that **ANDREW JACKSON DOWNING** is no more.

"Lovely in death the beauteous ruin lay."

His precious remains are borne back to their native city and to his house of mourning. There they meet his widowed wife, whose ear, during the fourteen years of their wedded life, had been so quick to catch the sound of his returning footsteps, and who had been the first to greet and welcome him. Alas! she is suddenly bereft by one fatal blow, of friend, father, husband! The funeral rites are performed; his body is committed to the tomb, "earth to earth," "ashes to ashes," "dust to dust!"

Thus terminated the earthly career of our lamented brother and associate. But his name shall be perpetuated by fragrant flowers and delicious fruits; by gushing fountains and murmuring streams; by grateful shade and balmy breeze, and by many a rural scene, and many a tasteful home, he shall be remembered.

"Where cottages, and villas rise;
Where cultured fields and verdens smile around."

But to be more specific, the results of his toil appear in the forests which he has preserved from the merciless axe—in the trees which he has described and made to contribute more abundantly to the taste and comfort of their proprietors—in the avenues which he had adorned—in the lawns and pleasure grounds which he has laid out and appropriately embellished—and in numberless buildings which stand as monuments to his architectural skill.

The fruits of his labor are also gathered in thou-

sands of gardens and conservatories. The numerous cottages and villas which have lately sprung up in the towns and villages about our commercial cities, and throughout our happy land, evince his genius; and it is due to his worth to say that few have left a mark so deep and broad on the generation in which they lived.

In responding to the calls which have been made upon me to pronounce the eulogy of our deceased friend, I shall attempt nothing more, and certainly can do nothing better, than to articulate the language of his useful life, and to give free utterance to your own convictions of his worth.

Mr. Downing was born in Newburgh, N. Y., on the 31st day of October, A. D., 1815. In his boyhood he manifested a fondness for botany, mineralogy, and other natural sciences, which at the age of sixteen, when he left school, he was able to prosecute without the aid of an instructor. At that period, his father having died when he was but seven years of age, his mother desired him to become a clerk in a dry goods store; but he, following the native tendencies of his mind, preferred to remain with his eldest brother in the nursery and garden, whose accuracy and practical skill in horticulture gave special prominence to the same traits in the deceased, and with whom he might study the theory, and perfect himself in the practice of his favorite art.

In the formation of his character, we also recognize with gratitude the agency of Baron de Liderer, the Austrian Consul, whose summer residence was in his native place, a gentleman of large endowments and attainments, of eminent purity of mind, and refinement of manners, a mineralogist and botanist, who discovered in young Downing a mind of kindred taste, who made him the frequent inmate of his family, as well as his own companion in numerous excursions for the scientific exploration of the surrounding country.

But his sensibility to artistic beauty was cultivated and developed by the lamented Raphael Hoyle, an English artist, residing in Newburgh, and who, like himself, went down to an early grave, leaving behind him specimens in landscape painting, true to nature, and of remarkable delicacy of coloring. His manners were much improved and adorned by his familiar intercourse with his neighbor, Mr. Edward Armstrong, a gentleman of refinement and wealth, at whose country seat on the Hudson he was introduced to the Hon. Charles Augustus Murray, an Englishman, whose book of travels in America has been admired on both sides of the Atlantic. There he also made the acquaintance of many other distinguished men, who subsequently became his correspondents and personal friends.

These associations had, no doubt, much influence in strengthening his refined and generous nature. He devoted all the spare which he could reclaim from physical labor to reading and study. In the bower of his garden he held frequent converse with the muses, who inspired him with the poetic fire which illumines his pages, and imparts peculiar vivacity and energy to his style.

At the age of twenty-two, on the seventh of June, 1838, he married Miss Caroline Elizabeth, daughter of J. P. DeWint, Esq., of Fishkill Landing, a lady of congenial spirits, of refinement and intelligence, to whom the world is much indebted for his usefulness. In grateful return for her val-

uable services, she now enjoys the commiseration and condolence of his friends in America and transatlantic countries. But with all these aids, still Mr. Downing was, in the strictest sense, *self-taught*; a fact which deserves to be recorded, not only to his praise, but as an encouragement to thousands of aspiring youth. If he was never a pupil in the studio of an artist; if he studied natural science in the laboratory of nature more than in the school of scientific chemists; if he enjoyed not the advantages of a liberal and professional education, valuable and desirable as these means of improvement certainly are; yet he was at all times and everywhere a learner; and the lessons of wisdom which he received, he promptly reduced to practice; a circumstance which made him eminently practical and national, a man of his own age and country.

I will illustrate his habits of observation and study. In a walk he plucks from an overhanging bough a single leaf, examines its color, form and structure; inspects it with his microscope, and having recorded his observations, presents it to his friend, and invites him to study it, as suggestive of some of the first principles of Rural Architecture and Economy.

Does he visit a beautiful country seat, he sketches a view of it, and of the grounds about it; notes whatever is true to nature, accurate in taste, or excellent in design; and from his copy a plate is engraved, and in the next number of his *Horticulturalist* the whole scene, with his valuable comments, is given to the lovers of the landscape and the garden.

He returns from the forest. A short extract from his journal will explain the object of his tour, and afford a fair specimen of the beauty and forces of his style:—

"Nature plants some trees, like the fir and the pine, in the fissures of the rock, and on the edge of the precipice; she twist their boughs, and gnarls their stems, by storms and tempest—thereby adding to their *picturesque* power in sublime and grand scenery. But she more often develops the *beautiful* in a tree of any kind, in a genial soil and clime, where it stands quite alone, stretching its boughs upward freely to the sky, and outward to the breeze, and even downward to the earth, almost touching her in her graceful sweep, till only a glimpse of the fine trunk is to be seen at its spreading base, and the whole top is one great globe of floating and waving luxuriance, giving us as perfect an idea of symmetry and proportion as can be found short of the Grecian Apollo." "One would no more wish to touch it with the pruning knife, the axe or the saw, (unless to remove a decayed branch), than to give a nicer curve to the rainbow, or to add freshness to the dew-drops."

This description, for beauty, power of diction, and for fullness of nature, not only harmonizes with the pictures, but even rivals the finest touches of the pencils of Claude, Poussin, Salvator Rosa, or any other great master of landscape.

He makes the tour of New England, and stops at New Haven, the city of elms. He walks out from the Tontine upon the green, admires those grateful shades, their majestic form, their gracefully waving boughs, and they revive in his mind the history of the elm, its varied use for fuel, timber and shade. He arrives at Hartford. The first object of his attention is the "Charter Oak."

He hastens to visit it, stands before it, all filled with veneration, exclaims, with the bard of Manna, translated by Dryden,

"Jove's own tree,
That holds the world in sovereignty!"

He sketches it, gives you a copy of it in his "Landscape Gardening," together with his classical and scientific account of the king of the American forest. He journeys up the beautiful valley of the Connecticut to Stockbridge, Massachusetts, whose streets are lined with the sugar maple, "clean, cool, smooth and umbrageous." He there increases his love and admiration of the American maple, the beauty of whose vernal bloom is surpassed only by the unrivalled hues of its autumnal foliage, dyed with the tints of departing day.

By scenes like these, and by scientific reflection thereon, he prepares himself to give those last and well directed blows at the "heavenly" tree, the Ailanthus, and also at the Abele Poplar—both of which he kills off in a most *celestial* manner, to make room for the more deserving and truly American Maples, Oaks, Elms and Ashes, for the Magnolia, the Tulip and others. Of the latter, how beautifully he speaks in the last leader from his pen, in a manner so easy and flowing, and so characteristic of the man. "We mean the Tulip tree or the Liriodendron. What can be more beautiful than its trunk, finely proportioned, and smooth as a Grecian column? What more artistic than its leaf, cut like an arabesque in a Moorish palace? What more clean and lustrous than its tuft of foliage, dark green and rich as deepest emerald? What more lily-like and spacious than its blossoms, golden and brown shaded? And what fairer and more queenly than its whole figure, stately and regal as that of Zenobia!"

In the progress of his journey, he reaches the commercial metropolis of New England. It is the annual exhibition of the Massachusetts Horticultural Society in that city. He enters its Hall, is greeted with a cordial welcome, and invited to examine its collection, particularly the extensive show of pears. In a subsequent discussion with its fruit committee, he proposes to them a question in his direct, practical and impressive manner,—“Will each of you please to give me the names of the best three varieties of the pear, together with your reasons for that preference?” He obtains their opinions, and publishes the same, puts the public at once in possession of their long and dear-bought experience.

The same practical and studious habit is remarkably exemplified in his foreign travels. Unlike other tourists, who first visit the tower of London or Westminster Abbey, he hastens from the parks of that city to Chatworth, then to Woburn Abbey, Warwick Castle, and other places where agriculture, horticulture, architecture and all the fine arts have for ages vied with each other in whatsoever is ornamental in embellishment and princely in wealth, and where are scenes of natural and artistic beauty and grandeur, which attract the chief masters of the world. He is received and entertained with kindness and partiality by the Earl of Hardwicke, the Dukes of Devonshire and Bedford, and others with whom he formed many warm friendships in the mother country. From these places, where wealth, art, nature and genius have congregated whatever is most beautiful to the eye, most approved in taste,

or most impressive to sensibility, he prosecutes his journey; everywhere observing, noting and studying the objects and scenes about him. To him *not a tree, a plant, a leaf, a blossom, but contained a folio volume.*

We have necessarily amplified this part of our subject in order to give a correct view of the manner and extent of his education, of the peculiarities of his style, and of the formation of his character, and to furnish the materials for a just appreciation of his worth, and for a philosophical judgment of himself and of his works.

Mr. Downing was just what we have represented, a *self-taught* man. His name will appear in all coming time, emblazoned upon the roll of fame, among such worthies of that class as Roger Sherman, Benjamin Franklin, David Rittenhouse, Benjamin West, and Nathaniel Bowditch. He was not, perhaps, so profoundly scientific, yet he was well grounded in vegetable physiology, and in the first principles of the arts to which his life was devoted. Being the sovereign of his own powers and acquisitions, he could instantly bring them to bear on the subject of his investigation or discourse.

In his character we find that assemblage of virtues commonly called *amiableness*. On this depended the suavity of his manners, the sincerity of his friendship, and the freedom of his hospitality. His guests always received a hearty welcome, and found at his residence a quiet home. Here Miss Bremer, whose fame in letters is like that of the Swedish nightingale in song, wrote the introduction to one of her works; and in speaking of his kindness and hospitality, she says: "I never shall forget, nor ever be able fully to acknowledge them, feeling as I here do, at this moment, all the blessings of a *perfect home*."

He also possessed, what is rarely found in combination with these qualities, *keen perception, great energy, decision and boldness*. Blessed with an almost intuitive perception of character, he read men at a glance. When he was in London, he desired an assistant, who would return with him to America and aid him in the architectural department of his business. He visits the architectural exhibition in that city, and seeks an introduction to the Secretary of that association, to whom he reveals his object, and by whom he is introduced to Mr. Calvert Vaux, as a gentleman well qualified for the place. They exchange references; and so readily did he inspire confidence in this stranger, and also perceive that he might safely propose the same in him, that on their interview the next morning, he concludes a contract, agrees upon the precise time when they will start from Liverpool for America, hastens to Paris to complete his unfinished business, fulfills his engagement, and in two weeks they are unitedly prosecuting their labors at Newburg. Such was his activity, promptness and despatch.

The increasing extent of his business would have employed several common men; his correspondence alone would have occupied a private secretary; yet the number and urgency of his duties never depressed him, never confused him, never made him in a hurry, because he was always the *master*, never the *slave* of his business.

Having once thoroughly investigated a subject, he rested with confidence in his conclusions, and published the same with a boldness which arrested

attention and commanded respect. Witness his just condemnation of "*white houses*" amidst rural beauty, a color which no master of landscape would dare to transfer to his canvass, yet which is as common in the country as it is opposed to economy and good taste. Witness also his condemnation of the impure air of stove-heated and unventilated dwellings, air which, with equal truth and propriety, he denominates "the favorite poison of America." This article, copied by numerous journals, read by thousands, and commending itself to their common sense, is fast producing a reform, conducive alike to health, comfort and long life. But his *kindness and magnanimity*, his freedom from envy and jealousy, enabled him to admire and commend whatever was excellent and praiseworthy, as freely and decidedly as he condemned their opposites. These characteristics are exemplified in his monthly reviews of the press, and in the notices of the works of other writers, which appear in his volumes.

In a word, Mr. Downing was in manners modest, polite and gentlemanly,—in perception of fitness and propriety intuitive,—in taste accurate and refined,—in tact and practical skill *remarkable*—in love of country strictly national, *American*—in sentiment pure—in life incorrupt—in most respects a *model man*—in all *nature's own child*. It has been justly said of him, "at whatever point of view we regard him, we are compelled to admire the symmetry of his character, the vigor of his mind, the versatility of his talents, and that healthful flow of enthusiastic feeling which marks his writings. There are those who can work beautiful thoughts in marble, who can clothe them in the touching language of poetry, or bid them flow in the rounded periods and convincing strains of oratory; but few minds seem more fully possessed of the power to add art to the beauty of nature, and make the desert blossom like the rose."

His writings are a faithful transcript of his own character. If his diction sometimes contains unusual and even strange words and phrases, possibly ungrateful to some classic ears, the worst which enlightened criticism can say of them is, that they subordinate elegance to originality and force. But his language is generally pure, chaste and refined, not unfrequently beautiful and highly ornate. His style is peculiarly his own, and rigidly methodic, sometimes abrupt, but always versatile and flowing. It is remarkable for that of which he was passionately fond in nature, and to which, with some latitude of expression, we will appropriate the word "*picturesque*."

A single quotation will truly illustrate our meaning, and also these qualities of his style. We select the words with which he introduced the *Horticulturalist* to his readers with the first breath of summer. "Bright and beautiful June! embroidered with clusters of odorous roses, and laden with ~~ruby~~ cherries and strawberries, rich with the freshness of spring, and the luxuriance of summer—leafy June! If any one's heart does not swell with the unwritten thoughts that belong to this season, he is only fit for 'treasons, stratagems and spoils.' He does not practically believe that God made the country. Flora and Pomona, from amid the blossoming gardens and orchards of June, smile graciously as we write these few introductory words to their circles of devotees.

* * * * * Angry volumes of politics have we

written none, but only peaceful books, humbly aiming to weave something more into the fair garland of the beautiful and useful, that encircles this excellent old Earth." Such passages enliven and adorn his works.

Of these we can give but a brief account.

The first is his "*Landscape Gardening*," which introduced him to the literary and scientific world, and gave him a rank among the distinguished writers of the age. For years previous to its publication, he seemed retired from the world, abstracted and absorbed, but in reality, he was occupied in intense study of his subject. When he mastered it, and adapted its principles to American climate, scenery and people, he published it on both sides of the Atlantic.

Think of this young man, at twenty-six years of age, without the advantage of a liberal education—with no precedents to guide him, with only a few practical hints from such men as Parmentier, seizing upon the first principles of this science in the works of Repton, Price, Loudon and others, with a comprehensiveness of mind, with a power of analysis, an originality and fixedness of purpose, that would have done honor to the first scholars in other departments, popularizing and appropriating them to his own period and country, and actually producing a book which becomes at once a standard universally acknowledged by his own countrymen, and praised by Loudon, the editor of "*Repton's Landscape Gardening*," who pronounced it "a masterly work," and after quoting ten pages to give his English readers an idea of its excellencies, remarks, "We have quoted largely from this work because, in so doing, we think we shall give a just idea of the great merit of the author." This work the celebrated Dr. Lindley critically reviews, in sundry articles in his *Gardener's Chronicle*; and while he dissents from it on some minor points, yet in respect to its cardinal excellencies, he thus remarks: "On the whole, we know of no work in which the fundamental principles of this profession are so well or so concisely expressed." And in regard to Mr. Downing's explanation of this science, and his general definition of it, he adds, what is equally complimentary to our author and to American genius, "No English Landscape Gardener has written so clearly, or with so much real intensity." Closely allied to this science is the subject of Architecture, to which our author next turns his attention; and in the following year he publishes his "*COTTAGE RESIDENCES*." Of this work Mr. Loudon also observes, "This book is highly creditable to him as a man of taste and an author, and cannot fail to be of great service." This latter work, in time, creates occasion for his "*ARCHITECTURE OF COUNTRY HOUSES*," including designs for *Cottages, Farm Houses and Villas, with remarks on the interiors, furniture, and the best modes of warming and ventilating*.

Of these, the English and American press offer remarks so similar to those which we have already submitted on his *Landscape Gardening*, as to supersede the necessity of much amplification. We select the closing words of an English review of one of these works:—

"We stretch our arm across the 'big water' to tender our Yankee coadjutor an English shake and a cordial recognition." We will add two examples of the American estimate of these produc-

tions. Says a gentleman resident on the Atlantic shore, who is eminently qualified to form an enlightened judgment:—"Much of the improvement that has taken place in this country, during the last twelve years, in Rural Architecture, and in Ornamental Gardening and Planting, may be ascribed to him." Another gentleman, equally well qualified to judge, speaking of suburban cottages in the West, says:—"I asked the origin of so much taste, and was told it might principally be traced to Downing's Cottage Residences and his *Horticulturist*."

Of his remaining works, the "*Horticulturist*," his monthly journal, which has entered its seventh year, is extensively celebrated for its appropriate, interesting and eloquent leaders—for its numerous and able correspondents—for its varied learning and ripe experience—for its just and faithful reviews—and for its tasteful embellishments and rural decorations.

His "*Fruits and Fruit Trees of America*,"—a volume of six hundred pages, was printed in 1844, both in New York and London, and in two different forms—the duodecimo with lineal drawings, and the royal octavo, both with these drawings and with colored engravings. It has passed through thirteen editions, and originally combined his personal observation and experience with those of other American fruit growers down to that date.

Besides these productions of his pen, he edited, with notes and emendations, "*Mrs. Loudon's Gardening for Ladies*;" also, "*Lindley's Theory of Horticulture*;" delivered various addresses; submitted reports to public bodies, and contributed numerous articles to the secular, literary and scientific journals of his day.

In addition to these labors, he rendered efficient services to the cause of agriculture and agricultural education. He constantly superintended his homestead—was a corresponding or active member in many horticultural and kindred associations—was influential and prominent in the establishment of this Congress, and from its origin, chairman of its fruit committee—the author of the "*Rules of American Pomology*," which, with some modifications, have been extensively adopted. He advised and aided in the laying out of grounds, in the plans and specifications of various private and public buildings, and at the time of his death, not only had contracts for important professional services in Newburg, Newport, Georgetown, Albany, Boston, and other places, but was actually on his way to Washington to prosecute the business in which he had been engaged by the national government, for the laying out and adornment of the public grounds in that city. He had also projected several new volumes in the departments of his peculiar studies and labors, as well as the revision of some of his present works. The last effort of his pen was a postscript to a set of working plans to illustrate a design for an observatory, proposed to be erected in one of our principal cities.

Alas! that one so eminently useful, with such brilliant prospects before him, and whose place it is so difficult to fill, should be so suddenly removed! Such is the common exclamation! But this general sorrow may find consolation in his own devout words, in a letter of condolence addressed to me a few days before his death. They seem prophetic of this hour. "God knows what is best for us."

This dispensation is indeed mysterious; a wonder of Providence such as the All-wise and Infinite rarely permits. He takes away one to whom we are most attached, and that, too, when we can least afford to spare him. But let us hope that this melancholy event may awaken public attention, and direct it from the man to his pursuits, and to their connection with the public welfare, and thus become the occasion of raising up a host to carry out and consummate his worthy enterprise.

We have thus spoken of the last hours of our lamented friend—of the dreadful catastrophe which terminated his earthly career—of the circumstances and influences in which his character was formed—of its most prominent and commanding features—of the great events of his public life—of his published works—and of his plans of future usefulness.

As your humble servant, appointed to speak of his "life, character and virtues," it is not proper for me to indulge personal and private partiality. It has been my endeavor to form such an enlightened judgment of his worth, and such an unbiased estimate of his numerous excellencies, as shall be in harmony with your own opinion, and shall command public confidence and respect. The duty we perform is without any expectation of adding to the lustre of his fame. His works are his best eulogy—the most enduring monuments of his worth.

But he has gone! His seat in this Congress is vacant! Another will make the report which was expected from him! We shall much miss his wise and leading counsels in our deliberations and discussions, his prompt and energetic action in our endeavors to advance the worthy objects of this association, in the origin and progress of which his agency was so conspicuous. He has gone! He is numbered with those patrons and promoters of the ornamental and useful arts who rest from their labors;—with the erudite and sage Pickering, the wise and laborious Buel, the ardent and scientific Mease, the humorous and poetic Fessenden, the practical and enterprising Lowell, the tasteful and enthusiastic Dearborn, the indefatigable and versatile Skinner, the scientific and voluminous Loudon, and others of noble design and enduring fame. These have fallen around us like the leaves of autumn; and Providence now calls on us to inscribe on that star-spangled roll the cherished name of Downing, struck down suddenly when his sun was at the zenith of its glory.

He rests in the bosom of his mother earth, in the city of his birth, and the sepulchre of his fathers, on the banks of that beautiful river where his boyhood sport, and where the choicest scenery inspired his young mind with the love of nature—a spot which will be dear to the thousands of his admirers, and which our love to him will constrain us to visit. We may resort to his hospitable mansion, but he will no longer greet us with his cordial salutation, nor extend to us the right hand of fellowship. We may wend our way through his beautiful grounds, but he will not be there to accompany us; instead of his pleasant and instructive voice, which once dropped words of wisdom and delight on our ear, we shall hear the trees mournfully signing in the breeze—the cypress moaning his funeral dirge, and the willow weeping in responsive grief, "because he is not." "His mortal has put on immortality."

When we think of the place which he occupied in the hearts of his countrymen and contemporaries—of the expanding interest which he has awakened in the rural arts, the refinements and comforts of society—of his unfinished plans, which others, inspired by his genius, will unfold and consummate—and of his works, which will be admired when the tongues that now praise him shall be silent in death, our sense of justice accords to him an early immortality—a fame which history will cherish, art adorn, and grateful posterity revere.

He is dead, yet how little of *such* men can perish! The clayey tenement may indeed fall and crumble, but to him who dwelt in it, a place is assigned in the firmament of American genius, far above the storms and convulsions of earth—"in that clear upper sky," where he shall shine forever to illumine the path of intelligence, enterprise and virtue, and henceforth to enkindle in the human mind a love of order, taste and beauty. We rank him with those who start improvements which advance ages after they are dead, and who are justly entitled to the consideration and gratitude of mankind. Washington and his illustrious associates are dead; but the liberty which they achieved still lives, and marches in triumph and glory through the earth. Franklin is dead; but the spark which his miraculous wand drew from heaven, speaks with tongues of fire and electrifies the globe. Fulton is dead; but he awoke the spirit of invention which turns the machinery of man—aye, and he awoke also the genius of navigation.

"And heaven inspired,
To love of useful glory roused mankind,
And in unbounded commerce mixed the world."

Downing also is dead; but the principles of artistic propriety and ornament, of rural economy and domestic comfort, which he revealed, await a more full and perfect development; and as they advance towards their glorious consummation, grateful millions shall honor and cherish his name. HIS MEMORY SHALL LIVE FOREVER.

For the New England Farmer.

AUTUMN, MORAL REFLECTIONS.

MR. BROWN:—The decaying leaves of autumn, fading memorials of the instability of human friendships and the perishable nature of all terrestrial things, lie scattered at our feet in all their dying splendor. They speak to us in a voice and language which we cannot misunderstand or misinterpret, of our own dissolution and of the time when we shall be garnered up in the house appointed for all living. Though there is a melancholy sadness in the waning year, still it is mingled with gladness. This is the season of all others which has animated the muse of the poet, and attuned his soul to the symphonies and beauties of creation. While to the lover of nature, she is at all times a living embodiment of the soul of Poetry, at this delightful season of the year, she unfolds her ample volume to his admiring gaze, and compels him to read her instructions. Willing, or unwilling, we are forced to moralize. The mild and chastened beams of an October sun, spread a golden radiance over hill-top and valley. The forests are decking themselves in all the gorgeous colors of the rainbow, as if preparing for a

general holiday. This is the season for the hunter. He takes his gun and hies him away to the old woods where the tall chestnut grows, to seek the squirrel among the boughs. This is the season, too, for pumpkin pies and mirthful festivity. Aye, commend me to the thorough bred *Yankee girl* who has been initiated into the mysteries of this branch of domestic economy, for a wife. Her with the ruddy cheek and sparkling eye, the cheerful farmer's daughter.

She does not consider herself disgraced, by taking sufficient physical exercise, to preserve her health and vigor. By the way, what an error do those parents commit, who educate their children in such a manner, as to lead them to consider every species of useful employment as below their dignity. Not such, indeed, were our grandams of yore, when men were heroes and women were patriots. They did not faint at the sight of a wash-tub, nor go into hysterics because they had their husbands' feeting to mend. Even Lady Washington herself, the noble and intellectual companion of the Father of his Country, did not hesitate about knitting her own stockings.

The harvest will soon be gathered in, and the husbandman will have leisure to review the labors of the season and prepare for the rigors of the approaching winter. Soon the wintry winds of November will chant their melancholy dirge around our dwellings as an interlude to the coronation of the winter king. The lovely queen of autumn must soon resign her sceptre to the stern monarch of winter. Though at his approach, the hand of death seems to strike all animated existence, it kindles the fires of the domestic hearth, and draws into closer communion the members of the family circle.

With what delightful anticipations did we, when a boy, look forward to the close of the season's labors, and contemplate the time when we should again gather around the old school-house, and renew our acquaintance with books and friends. The old *red school-house* (the scene of so many pleasing recollections of our boyhood,) one of those interesting relics of times gone by, made doubly interesting from the fact that like the recently discovered monuments of the Assyrians, they are overlaid with certain elaborate carvings, (the products of genius no doubt,) but which might puzzle the genius of Capt. Rawlinson, even, to decipher, and also from the circumstance that within this unpretending edifice, in spite of pedagogic frowns, the incipient stage of many interesting courtships which resulted in happy marriages, was begun. But the season of youth has flown, and the stern realities of life are before us. T. D. W.

Acton Centre, Oct. 1.

MEDICINE.—The best medicine in the world for most complaints is abstinence. Upon the first symptoms of disease stop eating and drinking, kiss your wife and children, take a pleasant book and remain quiet. If you have no wife and children, put your feet into a pair of soft slippers, make a good fire and take an easy chair by it, and dream of them in prospective. You have no idea how like a charm this prescription will work, until you try it—and it isn't all in the "doctor books," either, good as it is

THE WADLEIGH PEAR.

On the first of September, we received a box of pears from Mr. N. P. MORRISON, of Somerville, which he called the *Wadleigh Pear*, and gave us a brief description of its history. They were in good eating condition on the 4th, and in our opinion, were as good as any pears ripe at that time. In the market they sold more readily than the Bartlett, at the same price. The fruit is rather small, yellow, melting, tender, very juicy and of high flavor. These pears originated on a tree standing at this time in Sanbornton, N. H., on a farm now owned by the third generation of *Wadleighs*, and has probably been standing there for seventy years. Mr. Morrison states that he has raised ten or twelve bushels of the pear this season, that the tree is a good bearer, hardy, and the fruit in demand in the market.

We mean to be exceedingly careful what fruits we recommend, but do not hesitate to say that we believe the *Wadleigh Pear* a most excellent fruit and worthy of cultivation. Mr. Morrison raises a good deal of fruit, and has had much experience in the cultivation of trees, and states that he believes it the best pear coming in at that season.

Believing this, we have gone to the expense of the above engraving, in order to call more particular attention to it.

BROOM CORN.—We have received from the Hon. E. B. HUBBARD, of Sunderland, two papers upon the culture of this plant which will be found valu-

able to all engaged in its cultivation, and exceedingly interesting to those who are not. Mr. HUBBARD writes with clearness, conciseness and force, and his articles are, therefore, widely extended and read. We shall publish the first number next week.

For the New England Farmer.

WHEAT—CORN—BARLEY.

The following is the manner in which Mr. ASAPH ANDREWS, of Shrewsbury, in this State, prepares his land for cultivation. He turns his grass land in November. Harrows fine—applies twenty loads of green manure, which is incorporated with the soil—in the spring he plows with a one-horse plow about four inches deep. He plants corn manuring with one shovel full in each hill—he plants Dutton from selected ears. This crop for several years has amounted to from seventy-five to ninety bushels of shelled corn per acre; in the year 1851 he raised 200 bushels on 2 1-2 acres. The spring following the corn crop, he splits the hills with a one-horse plow—harrows with a bush harrow, and then sows his land with Italian spring wheat—the quantity is two bushels per acre, and an equal quantity of salt upon the land. He prepares the seed by soaking it in water. If the seed does not rise at first, he applies salt to the water, which will cause it to rise; after soaking the seed he places it in a half-hogshead and then sifts on ashes, mixing them well together—the seed will then be with the ashes about twice the natural size. Sows immediately. His crop of wheat has averaged thirty bushels per acre for the past eight years—one year he raised 44 1-2 bushels per acre. It is his custom to sow salt with all kinds of

spring grain—the second year he seeds to grass. Occasionally he has to plow and seed the second time, owing to the seed not taking well. His land lays in grass six years—he plants 2 1-2 and seeds 2 1-2 acres yearly. Of barley, he raised one season 55 bushels per acre.

He asks a comparison with any farmer in the State in regard to the amount of stock kept on an equal number of acres of improved land.

Enclosed I send you a sample of the wheat raised by Mr. Andrews.

Mr. Andrews considers the salt and ashes about equal for stiffening the straw.

Yours respectfully,

ARTEMAS FAY.

REMARKS.—This letter was sent to the Hon. MARSHALL P. WILDER, President of the Massachusetts Board of Agriculture, accompanied by a specimen of the Italian spring wheat, raised by Mr. Andrews, and with a request that it might be published in this paper. We give it place with pleasure, as it gives several items of good farming.

For the New England Farmer.

STEALING FRUIT.

DEAR SIR:—Your article on fruit-stealing in the last number of the *Farmer* will meet with a hearty response from every fruit-grower in the land, for surely the evil has become an alarming one, and the neighborhood of Boston is not the only region where many are deterred from raising good or even ordinary fruit on account of the vexatious, lawless marauders, who make no scruple of helping themselves, and will accept of only the best.

What sometimes gives aggravation to the case, is the fact, that after all the care and labor of rearing a favorite tree and seeing its fruit expanding into maturity—even after its colors had developed their richness and the hand was almost extended to gather the first fruit of this *honest labor* and *watchful care*, an unseen hand has plucked the fruit, and another long year of solicitude and watching must ensue before even a prospect of the realization of fond hopes can gladden the cultivator.

Now what inducement can there be for an individual to go on improving his place with fine trees, introducing and testing the value of new fruits, increasing the amount of human comfort as well as beautifying the earth by his labors, testing for the whole community the resources of their soil and climate, where such a state of society exists? Yet, in the present state of things in almost every community, it must be done under these disadvantages, if done at all.

"It is but a very small affair to take a plum, an apple or a pear, when there is a plenty." It is but a little more to fill a pocket, or a bag, or a wagon box. It is not now, it will soon grow to be so, and then how will any amount of fruit be safe?

The boldness and recklessness with which these depredations are committed, is sometimes very annoying. But a few days since, an individual told us of seeing a man, in stature at least—(he could not have had a man's soul) go to a choice tree of early apples and fill his pockets. The owner allowed his patience to tolerate this. But the thief did not allow his mischief to stop there, he went to a tree of valuable winter apples and began to

pelt them off. Then, the owner of the orchard requested him to stop destroying his fruit. His request, as he told us, was answered only by impudent language, and he went to another tree of fine winter fruit and again commenced strewing the ground with the treasure, and refused to leave the field—nor would he go until actually driven out. Yet he was still allowed to go unpunished, probably to his own disadvantage and the future danger of the commonwealth. And why? In the first place the individual who claimed to have lost the fruit was a very clever man. He probably did not wish to injure the feelings of the man who had taken his property and assailed him with provoking language, by showing him to be a thief. And, again, he probably thought that the process of bringing the miscreant to justice would (as is true) cost him, as an individual, more in the time he must spend, than he would gain by the operation. In the third place, he might have felt his own reputation somewhat at stake by commencing a prosecution, for many who claim to be very honest and tenacious of their own and others' rights would perhaps call him a *very small man*,—a very mean man,—a very quarrelsome man, if he had assumed his rights and exposed a rascal to public view, and rewarded him with the punishment which his own iniquity had earned. "Well, fine times if a man must be taken and tried as a criminal for getting a few apples," is an exclamation that would fall easily from many lips.

So we see there are obstacles in the way to prevent modest and unassuming men from defending their own rights and those of the community. They act honestly, no doubt, hoping they shall not be troubled again. But do they do right? Or are they not doing wrong as well as suffering wrong to allow such mischief to go unpunished?

"Have you no schools?" Massachusetts appropriates money every year, for the education of her children, to an amount which has given her a name and a praise the world over. But are the principles of right and wrong, as they develop themselves in the dealings of man with his fellow, inculcated here? Are children taught in these schools to respect the rights of property as a matter of self-preservation and a great moral duty? Are lessons like this inculcated at the fireside, in the social circle, and from the desk, in the manner their importance demands? Until all this is done, we cannot expect to see much improvement on the present state of things. Fruit will be stolen, melon-yards will be robbed, and other and higher crimes will be repeated, so that there will be no safety of person or property any where and under any circumstances.

Yours truly, EVELYN.

Elmwood, Sept. 13, 1852.

CANADA THISTLES.

While at the bookstore of Mr. SEXTON, the Agricultural Book Publisher, at 152 Fulton Street, New York, a few weeks since, we met a gentleman from Mamaronek, West Chester County, N. Y., who said he had found a sure, simple, and profitable way of extirpating the Canada Thistle. We thought if we could find a sure mode of extirpating the thistle at some expense we should be glad, but when told that it could be done at a profit, we had

lively visions of rank clover crops and tall wheat on many a forsaken lot. "But how is it to be done?" we inquired. "By cultivating the *Sunflower* upon the infested spots," said Mr. HALL. He had tried it thoroughly, and the thistle refused to grow with the sunflower, a single year sometimes completely supplanting the former. Give it a trial, ye who are afflicted.

For the New England Farmer.

LIVE AND LEARN.

BY SILAS BROWN.

MESSRS. EDITORS:—Though I have seen more than three-score years and ten, I have still a desire to see the progress and improvements which are yearly made and making in agriculture. The man who has no other measure than himself, to measure himself by, forms an erroneous opinion of himself, and to rectify his mistake it will be necessary for him to see what other people are about in the world. A man may suppose he has arrived nearly at perfection who never pays any attention to the progress that others are making around him. He that knows too much to gain instruction by reading or example is in a more hopeless condition than a very ignorant man who is sensible of his deficiencies. The above reflections occurred to my mind, lately, after making two or three little excursions, and seeing the improvements which are going on in the farming world.

I had frequently heard of the horticultural operations of the Messrs. Needhams, of Danvers, but the "half had not been told me." Their fruit garden was an extensive one, on land descending moderately to the south, furnished with a great variety of trees of all sizes, from large ones burdened with a profusion of fruit, enough to tempt any of the descendants of grandmother Eve, down to little saplings of a few months growth; also, with an extensive variety of fruit-bearing vines.—Among the vines, the object of special curiosity was the white blackberry, which (at the time I was there) was divested of its ripe fruit, but the vines were in a flourishing condition.

The next thing very noticeable was an argument which would subdue the incredulity of the most stubborn unbeliever—some 15 or 20 bushels of as fine cranberries as ever grew in the county of Essex, were on vines in their garden, cultivated in drills and kept clean of weeds as their onions. I should think if any man among us deserved a premium for persevering industry and merited success, attended with considerable expense, Mr. Needham, sen., stood in the front rank for a liberal one.—Messrs. Needhams' apple trees, pear trees, and all his trees, were cultivated and kept as clean of weeds as their kitchen garden; they have young grafted apple trees and pear trees of the best varieties for sale, as well as quince bushes, plum trees, and a variety of other fruit-bearing trees and vines.

There are none of us, old or young, who retain our mental faculties, but who can learn either by precept or example. It is worth the expense to every young farmer to visit the establishments of the noted farmers and horticulturists of our own land, if not foreign lands; they will find that somebody else knows "a thing or two" that them-

selves do not know. There is a great deal more skill required to make farming profitable at the present day than formerly, when farmers had nothing to do only clear and plow their ground, sow their seeds, hoe their fields and harvest their crops. Now our worn-out lands must be restored to fertility by learning to supply the exhausted ingredients to fertilize them, and then to discover what crops can be grown upon them to the greatest advantage; or in other words, find out what the land was made for. *The farmer is under the necessity of thinking and studying, as well as the engineer or mariner; what can a man do who has no mind of his own, but is wedded to some old dogmas or customs of his forefathers? Such ones may be wise in their own fancies, but still there is room "to live and learn."*

P. S. Last week I was in the orchard of Andrew Leighton, Esq., Elliot, Maine, and among other well cultivated and well burdened varieties, there was one tree that struck my fancy wonderfully, which was called the "Granny Simonds apple tree," from a circumstance which he said originated from some rogueish boys in Cambridge, the native place of the original tree. These boys annoyed "Granny Simonds" by their repeated plundering nocturnal or diurnal depredatory visits to rob her favorite tree, and gave it that name. The tree is apparently a great bearer of large, beautiful, light yellow, sweet fall apples. And now, gentlemen, I should like to know whether you have any knowledge of a tree of the above name and description about Cambridge, or any where else, and if you have, you would gratify me and probably some others by a note in the *N. E. Farmer*.

Wilmington, August 27, 1852.

S. B.

REMARKS.—From the description of the apple mentioned above, we have no doubt it is the *Early Sweet Bough*, a handsome and excellent apple.

ONE ACRE.

Mr. Mitchell has but a single acre of pine land, with a sandy loam soil, which with that adjacent was sold fifteen years ago, covered with timber, for six dollars per acre; more recently, and since the timber has been removed—and this, by the way, brought the owner \$60 per acre clear of expense—the Deacon purchased one acre for \$80—a very handsome advance, one would say, from its former value. And so it was; but the increase in value did not stop then, for if he owned the land to-day, it would take five hundred as good dollars as ever came from Philadelphia mint to purchase it. Mr. M. has cultivated it four years, and during that time has put upon it manure which cost him about \$32.33. He has upon it about 160 plum trees, embracing a great variety—the Jefferson, the Washington, the Lombard, &c.;—some 25 choice and worthy apple trees, grafted and budded; numerous peaches, mostly the Bartlett, some 500 quince, from which to furnish excellent stocks for engrafting;—grapes; the *Lambella*, the *Tewksbury* and native; and such a variety of vegetables, &c., as we have seldom seen. His potatoes are healthy, and notwithstanding the dry weather, are well formed and large—his beans are the largest we have seen this season—peas nearly past and some of them quite ripe—tomatoes, melons, and other vines, vigorous and

full of fruit. Among other interesting facts in the practical experience of Dea. Mitchell, is his success in growing the Sweet Potato, a specimen of which may now be seen on his land.

Let us here record one fact, for the benefit of farmers, especially on dry and sandy land. Mr. Mitchell sub-soiled his ground 13 or 14 inches deep and thoroughly pulverized the soil, some portions of which he spaded; and in all this severe drought, of which farmers are complaining, he has suffered scarcely the least injury.

The profits of this acre cannot be much less than \$100 per year, and this, too, when no profit is derived from the fruit trees, as they are all from the seed or bud within four years. We hope to see Deacon M. at our county meeting at Weare on Thursday, and to hear him speak of the profits of farming.—*Granite Farmer.*

For the New England Farmer.

DISEASE ON QUINCE BUSHES.

MESSERS. EDITORS:—While journeying a few weeks since, I noticed, in several places near the Connecticut River, a peculiar appearance on quince bushes—many of the leaves on the ends of branches had changed to a reddish brown. On examination, I found the ends of these branches withered and black, as if burned with a slow fire, and of course quite dead. In some cases only a few inches, and in others a foot or more, was blighted. By a close examination of the wood and bark, I could find no trace of an insect, or any apparent cause for the decay. On some branches fruit was growing within an inch of the blighted part, apparently uninjured, and the rest of the bushes appeared healthy. On my own bushes I have found a wart, somewhat similar to the black wart on plum trees—the inside of which has bright orange spots, which may be the egg or deposit of some insect. I send a small sample of the wood. Both these diseases are new to me, but you or some of your readers may be familiar with them, and may be able to point out a remedy. L. T. S.

Brookline, Sept., 1852.

REMARKS.—The blight on the quince bushes mentioned above has been noticed by us for some seven years, existing in a greater or less degree. Within a fortnight, we have passed through nearly all parts of Middlesex county, in this State, and find the same appearance in every direction. No one could answer our inquiry, "what causes this blight upon the quince bush?" Upon examination we could find no insect or trace of one, nor any cause for the numerous dead ends of the branches upon nearly every bush. Perhaps some of our correspondents can enlighten us upon this point, as well as upon that of the wart mentioned.

For the New England Farmer.

EARLY YIELD OF APPLES.

In the case of the apple tree grafted with Baldwin scions by Sylvester Newton of Southboro', Mass., in 1848, which bore nine barrels of marketable apples in 1850, the top was *not* all cut off. It was grafted in May with scions cut from trees and set the same day.

VEGETABLE REPRODUCTION.

The reproduction of vegetables is very analogous to that of the animal kingdom. The organs of reproduction are the stamens and pistils. These are situated within the colored leaves which, together with these interior and essential parts, form the flower. Sometimes both stamen and pistil are found in the same flower, which is then called a perfect flower. Sometimes the flower has only a stamen or only a pistil, and then it is called an imperfect flower. It is necessary that the stamen and pistil should communicate in order to the reproduction of the plant. In a perfect flower this communication is effected by the contact of the stamen and pistil. When, however, the flowers are separate, and communication cannot be had by contact, the fecundation is effected by the agency of the wind, which carries the pollen or dust of the stamen and deposits it on the pistil of the other flower. Sometimes the male and female flower are not on the same plant, but a different one, as is the case with the strawberry, the hemp and hop. Sometimes they are on the same plant, but a separate stem, as the melon. In plants of this kind, having imperfect flowers, the fecundation is exposed to be incomplete or to fail; and is sometimes assisted by the hand of the gardener. In this way the varieties of certain species of plants are chiefly produced.

These hybrid plants can be produced only when the parent species are nearly allied to each other. If the hybrid bear flowers which become fertilized by its own pollen, it may produce seeds from which similar plants may be raised. This may be repeated for two or three generations by agency of its own reproductive organs, or by intermixture with those of the parent stock or species. In this last case, however, it will be a new variety. If the several parent stocks from which the variety proceeded are of distinct species, the new hybrid race becomes soon extinct, unless it be continued by intermixture with one of the parent stocks; in which case it becomes merged in the stock.

Those flowers which contain the pistil are called fertile flowers, because they are capable of reproduction if fecundated by the stamens bearing flower. The sterile flowers may be easily distinguished from the fertile by the knob or bulb at the top of the stamen; which becomes covered with a fine yellow dust called pollen, which is the fructifying element of the stamen, and which must, in order to reproduction of the plant, be brought into contact with the stigma or expanded head of the pistil in the fertile flower.

This knowledge is valuable to gardeners, as by it they are enabled to select the suitable sets for strawberries and other fruits, to assist in the production of melons by placing the pollen on the stigma, and, by selection of pollen from different species, to produce new varieties.

*For the New England Farmer.***THE ORIOLE AND HAWK.**INTERESTING FRIENDSHIP BETWEEN A BALTIMORE ORIOLE
(FIRE HANGING BIRD, GOLDEN ROBIN, ICTERUS BAL-
TIMORE) AND A LARGE HAWK.

BY DR. CHARLES SIEDHOF.

In looking over the materials collected for the preparation of a popular book on the *Birds of New England*, I find the following curious fact noticed in my papers:

In the summer of the year 1849, one of my pupils, George Adams, son of Seth Adams, Esq., of Providence, R. I., a boy who had much taste for natural history, called my attention to a Baltimore Oriole, who had his nest in my garden, and who used to pay very frequent visits to a large hawk, which I kept in a cage attached to my barn.—When the boy told me of this circumstance, I could hardly believe it; but after I myself, as well as all the members of my family, including my pupils, had been eye-witnesses every day for about a month, there was certainly no reason to doubt.

The Baltimore Oriole, (the male bird, for the female was not so daring, but kept in a respectful distance) would every now and then enter the cage of the hawk, alight on the same perch with him, and feed on the meat, an abundance of which was always in the cage. He had so little apprehension of danger, that he frequently sang his merry song in the neighborhood of so powerful an enemy. Before we had been convinced of the generosity of the hawk, who justified so nobly the confidence placed in him, we tried to prevent the Oriole from entering the cage, and to chase him out of it as often as we saw him there; still seeing those visits daily and hourly repeated, we were delighted with the uncommon friendship between the two birds. The Oriole continued visiting his friend till he left us for the South. Whether the Oriole had perished on his journey, or whether he had forgotten his friend, I do not know; yet he was never seen again in the hawk's cage.

Some future time I shall give more illustrations of strong attachment of two different species of birds to each other. At present, I wish only to state, that my object in writing on birds is not the improvement of the system as such, but the careful observation of the peculiar manners and habits of the different genera and species. I would, therefore, kindly request such friends of nature as have had an opportunity of observing facts of this kind, to communicate them to me either directly by letter or in the papers, and to inform me, in the latter case, where I have to look for them. If Divine Providence should grant time and health, I hope, that assisted by those interested in the feathered tribe, I may be able to contribute some little to facilitate the study of the ornithology of New England, and thus to protect the most faithful friends of the farmer and horticulturist against unjust and unpardonable persecution. c. s.

REMARKS.—We hope those interested in birds, (and who is not) will attend to the above request of Dr. Siedhof.

THE OHIO FARMER.—This model of a newspaper comes to us this week with a map of the Ohio State Fair grounds which illuminates it with more than usual attractions. It is conducted with ability

and discretion, and will make a broad mark. The reader is invited to read its prospectus in another column.

*For the New England Farmer.***SWALLOWS.**

MR. EDITOR:—Sir,—In your remarks upon C. M. L.'s communication in the *Farmer* of August 28th, you ask "is he sure, &c."

Now sir, I am sure that the barn swallow did not leave here until August 27th. They were collected for several days prior to that day, and on the morning of that day they were in large flocks, very merry, but in a few hours they were about all gone. A very few remained for some days and then left.

At that time there was a nest in a neighbor's barn with eggs in it; they have since hatched, and are now evidently preparing for their departure. The above facts may suggest thoughts for some of your curious correspondents; as this place is an island about sixteen miles from the main land, and the frost does not come here until some three or four weeks after it has killed everything on the main. The potato rot is very severe here, more than half the crop is lost. Yours, &c.

ABRAHAM PLUMMER.

Matinicus, Me., Sept. 13, 1852.

TO PURIFY THE AIR OF AN APARTMENT.

The best method of effecting this will be obvious, if we consider the influence which heat exercises on the atmosphere. Air is expanded and rendered specifically lighter at the ordinary temperature, on the application of heat. Hence in every room heated above the temperature of the atmosphere, there is a continual current of air in circulation. The hot air in chimnies ascends and creates a draught towards the fire-place, whilst the hot air in churches, theatres, and other buildings, passes through the gratings in their ceilings, and its place is supplied by the flow of cold fresh air through the windows and doorways in the lower parts of these buildings.

The following simple experiment can be easily performed and is highly instructive:—Take a lamp or candle and hold it to the top of the door-way of a crowded apartment, or a room in which there is a fire, the hot air will be found escaping out of the room at the top of the door-way, as will be indicated by the outward direction of the flame. If the lamp be placed on the floor, the cold air will be found to be coming in at the bottom of the doorway. If now the lamp be gradually raised from the bottom to the top, the flame at first infected inwardly, will be seen gradually to become vertical as the lamp approaches the middle of the door-way, and finally it will be again blown outwardly when the lamp reaches its summit. It would appear from this, that in the middle of the door-way the temperature of the air is uniform, hence there is no current either in or out of the apartment. The whole experiment is highly interesting and instructive, and proves that a fire is an excellent ventilator. Hence to ventilate an apartment thoroughly, it is only necessary to kindle a good fire, and let the air have free access through the door-way and windows; the fire will create a current of fresh air into the apartment,

and its atmosphere will be thus kept continually changed.

We would remark, in conclusion, that those moving masses of air, called winds, are produced in a similar way. The sun is the great cause of winds; its heat is unequally diffused over the earth's surface, and the air becomes consequently heated in one part to a greater degree than in another. The hot air rises, and its place is supplied by the flow of the colder air from the surrounding parts. When the vacuum thus created is sudden, and the flow of the surrounding air is violent, the meeting of winds from all points of the compass produces at sea the phenomena of water spouts, and on land whirlwinds, caused by the air ascending in a spiral into the higher regions of the atmosphere. There are a number of cases which produce inequalities of temperature in the atmosphere; some of the most obvious of which are the alternation of night and day, and the occurrence of cloudy and unclouded skies. The air must be necessarily heated when illumined by the rays of the sun, and cooled when those rays are withdrawn.

OBITUARY OF A. J. DOWNING, ESQ.

Stars, unnumbered and unwept, go out from the broad sky; but when a planet fades from our vision, reflection is forced upon us. When one in the strength of his manhood and at the height of his usefulness is removed from his place, leaving his mission seemingly but half accomplished, we pause to acknowledge a higher power than our own, and purposes reaching beyond human foresight.

The sudden and untimely death of A. J. Downing, Esq., late editor of *The Horticulturist*, who was among those who lost their lives at the burning of the steamboat *Henry Clay*, on the Hudson River, on the 28th July, has fallen with a crushing weight on the hearts of his friends, and upon the public generally, as a common calamity. The place he occupied is now a blank—the commanding position to which he had carved his way, will wait long for a claimant. Though comparatively a young man, he had earned a reputation for ability, and enjoyed a popularity, which few had been fortunate enough to win. Without the advantage of a liberal education,—forced from youth to rely on his own unaided exertions,—at the early age of thirty-seven years he had elevated himself to an enviable rank among the first minds of the age. At whatever point of view we regard him, we are compelled to admire the symmetry of his character, the vigor of his mind, the versatility of his talents, and that healthful flow of enthusiastic feeling which marks his writings. There are those who can work out beautiful thoughts in marble, who can clothe them in the touching language of poetry, or bid them flow in the rounded periods and convincing strains of oratory, but few minds seem possessed of the power to add by art to the beauty of nature, and make the desert blossom like the rose.

Mr. Downing first claims our attention as a practical horticulturist and nurseryman. Unlike the majority of working-men, he did not busy himself exclusively in the manipulations and detail of his art, though in these eminently successful, but labored to discover the *first principles* of his profession, and to bring it up to its proper rank in sci-

ence and the fine arts. When we consider the discouraging circumstances under which he wrought, both in the means of prosecuting its work and the apathy of public sentiment, we wonder that he should have produced a treatise so perfect in his kind, so elaborate and finished, as his *LANDSCAPE GARDENING*. He handles, with apparent ease, the subtle topics of abstract beauty, the moral and social influence of its development in nature, and what is more remarkable, he is equally at home in carrying his theory into practice. This work first appeared in 1841, and though an elegant and costly book, has now passed through four editions. It was the first publication on the subject by an American author, and so completely unknown was the art, that the manuscript remained sometime in the hands of the author without a publisher. It was, however, a complete triumph, and may be said to have almost created a taste for ornamental gardening—it certainly refined and elevated it.

The discussion of the disposition and adornment of the grounds pertaining to a residence, naturally led to the subject of *Architecture*. With all the branches of this art, Mr. Downing was familiar, and his *COTTAGE RESIDENCES* and *COUNTRY HOUSES* display with great effect his admirable taste. He discusses the *meaning* and *expression* of Architecture, in a profound and comprehensive manner; and following, what seems to have been a motto with him—"Never to lose sight of good sense,"—he shows the absurdity of adopting ancient architecture as the highest form of the art, and argues the necessity of a peculiar national style of building. That he founded a distinct school, we do not assert; but from many sources, and particularly from his own varied culture, sound judgment, and correct taste, he drew just what seemed best adapted to the wants and capacity of the country.

The Fruits and Fruit Trees of America, which was issued in 1846, presents to great advantage the pomological research and experience of Mr. Downing. This work is admirably executed, and has met with universal favor. These works of Mr. Downing have given this country a rank among other nations in horticulture and rural taste, and exerted a wide influence upon the improvement of our own gardens and houses. Many a residence, beautified by his skill, many a smiling lawn, and gracefully disposed group of foliage, remain as fit monuments to his memory, and many a home made happier by his teachings, will be saddened by his death.

In the editorship of the *HORTICULTURIST*, he has shown, perhaps, better than in his other writings, the peculiar fitness of his talents to educate the popular taste for the beautiful in nature and art. The success which has attended this periodical, and the increased attention which is being paid to landscape gardening, horticulture and rural decoration, are proof of the beneficial influence of his labors. Whether we read his *Letters from England*, which exhibit a refined literary taste, and a delicate appreciation of and full acquaintance with the pleasures of a scholarly and cultivated mind, or the plain sayings and wholesome counsel of "Old Digger," we recognize the same sterling sense and discriminating judgment. Mr. Downing was not by eminence a theorist. It was not his aim to build castles too grand and lofty for human realization, or to show the power of his intellect by forming conceptions, which imagination

only could give being to. The great question with him, was, how much of the really beautiful can be made subservient to the public good? how far can elegance and utility be combined? how much of the spirit of the amateur can be infused into the mass of the rural population? He has answered these questions by his deeds.

Mr. DOWNING was an American, and all his thinking and acting tended toward the welfare and elevation of his country. Very much of his deserved popularity is owing to his ability to popularize whatever he wrote upon. He seized upon what was most needed, and upon that alone, and with striking point and directness, presented it in such form, that his conclusions were irresistible.

His style of writing is unaffected and flowing, and his diction, though elegant and ornate, is never verbose or tiresome. Such a style grew naturally out of his characteristics of mind and habits of thought. His mind was furnished and cultivated, and his impulsiveness bore his thoughts by the nearest way to the desired end. This brings to notice that peculiar earnestness and sincerity which everywhere is visible in his writings. Neither a philosopher or an enthusiast, he combined the excellencies of both in his individuality. Above all others, he was the man best fitted to mould the architectural and rural taste of the country to a correct model, to guide public sentiment to whatever is highest in nature and purest in art, and to aid in making America what heaven designed it should be, the garden of the whole earth.

Mr. DOWNING has closed his labors too early to have shown the full maturity of his power. If his youth has been thus productive, what results might have crowned a longer life! what beauty might have sprung from a riper experience and an enlarging capacity!

About two years since, Mr. DOWNING received an invitation to visit Washington, for the purpose of conferring with the President with reference to the laying out the public grounds in the vicinity of the capitol. For the last year and a half he has been engaged in designing and perfecting his plans, and in accordance with them, a park of some 160 acres is being constructed. It will afford the only example of grounds to such extent, laid out by the rules of art, in this country, and will undoubtedly be a most perfect work of its kind.

In his private character, Mr. DOWNING was upright, manly, and enthusiastic, and he entered with zeal and energy into every subject which promised to elevate and refine his fellow-men. In his social relations he was a gentleman in the best acceptance of the term. Courteous, affable and polite in the stranger; generous, warm-hearted, and confiding to his friends, he was universally respected and loved.

The sad circumstances of his death make us less reconciled to his loss. Mr. DOWNING, in company with his wife, and her mother, sister, and younger brother, together with a lady friend, Mrs. Wadsworth, embarked on the *Henry Clay*, full of buoyancy and joyous expectation, on their way to Newport. Scarce two hours have passed, and that circle is broken. Some are sleeping beneath the wave,—others are weeping on the shore this wreck of hope and happiness. Mr. DOWNING, his wife's mother, Mrs. DeWint, of Fishkill, and Mrs. Wadsworth, were lost—the remaining members of the party were saved,—Mrs. Downing almost

miraculously. As Mr. DOWNING was an excellent swimmer, he must have been borne down by the crowd, or perished in the attempt to save another's life.

We unite with his personal friends and the many who are endeared to him by that charm which his writings breathed, in tendering our heartfelt sympathy to Mrs. DOWNING. We too can mourn that a great mind has been removed from our companionship,—that a noble heart has ceased to beat,—that a life, rejoicing in such beauty and promise, has gone out thus early.—*Albany Cultivator*.

CATTLE SHOW AT LEBANON, N. H.

The annual Cattle Show and Fair of the *Connecticut River Agricultural Society* took place at Lebanon, the town next south of Hanover, on Wednesday and Thursday, Sept. 22 and 23, 1852. Preparations were made in the centre of the village by enclosing the common, making a circle of one-fourth of a mile, and enclosing the large town hall, where the fruits, vegetables, needle-work and machinery were deposited. The weather was favorable, and the people of Grafton County did themselves great credit in all the departments of the show.

FIRST DAY—HORSES, CATTLE.

On Wednesday, the first day, there was a display of horses, in which the Black Hawk and Morgan blood was obvious, and there was some pleasant trotting; and although none of the horses were trained, several came in in about three and a half minutes. There was a fine display of cattle in the yoke, and among the young stock a Devon bull 15 months old, the property of NORMAN HIBBARD, of Grantham, which we thought the handsomest animal of the kind and age we ever saw. There was also a good show of sheep, not imported, but of the best foreign blood; some fine swine, partly Suffolk, poultry, &c. Large numbers of persons were present, the band discoursed sweet music at their concert in the evening, and the day passed off with much gratification to all.

SECOND DAY—PLOWING MATCH, TROTTING, ADDRESS.

Thursday morning was quite cool, sunshine and clouds alternating, but without any present prospect of rain. Mountain and vale poured out their hardy sons and daughters with bounding hearts, and the hill-sides rang with the rattling of carriage wheels and with the echoes of the steam whistle and trains, winding along the streams like streaks of light athwart the eastern sky. From every quarter the living tide came on; from the sweet vales of the Connecticut and the dancing White River, and from the Grantham Mountains, came the men, women and children, to the great Festival of the Farmer. Gladness was upon every face; the horses were all mettle in the cool morning air; old people spun their yarns in sunny corners, while the young men bounded about to shake

off an excess of animal vigor, and the rosy-cheeked maidens clung closer to the arms of their "gay Lotharios." Auctioneers quoted scripture and Shakespeare, mingling the sacred and profane as badly as the jumble of their own carts, while the "Soap man" quietly pocketed the change of the New Hampshire boys. There was plenty of bustle, good-nature and fun, and after strolling among it for an hour and getting many a good lesson on the bright side of human nature, we left to look at the

NEEDLE WORK, FRUITS AND VEGETABLES.

We have seldom seen a finer display of needle work, such as quilts, rugs of yarn and rags, table covers, and tapestry, linen, cotton and woollen hose, with most of the articles of utility or fancy of common household manufacture. Apples and plums were in great variety and perfection; among the contributors were JOSEPH PINNEO, of Hanover, WILLIAM HOWARD, of Orford, and ZUER ELDRIDGE, DANIEL STICKNEY and JOHN HIBBARD, of Lebanon. Other contributors had fine fruit, but whose names we did not learn. The show of pears, peaches and melons was small—that of squashes, pumpkins and garden vegetables, grand; it seemed as if they had been trying to raise some of them as large as their hills.

There was not a large collection of machinery or implements, but what was exhibited was of the best manufacture—such as tenoning, boring and mortising machines, carriages, plows, scythes, lead pipe, yokes, furniture, &c., all manufactured among the people themselves, and principally at Lebanon.

The address was delivered by the editor of this paper, and enforced the necessity to the farmer of a better knowledge of the occupation in which he is engaged—of the organic and inorganic life about him. Multitudes thronged the church until fears were entertained of its safety, when a happy thought of the marshal called out Prof. SANBORN, of Dartmouth College, where he gave the "outsiders" an eloquent address while the services were going on in the church. The music by the LOWELL BRASS BAND, and Glee Singing, conducted by Mr. PUSHKE, were of the highest order.

Our thanks are due the Hon. A. B. CLOSSON, President of the Society, and other officers, and especially to C. C. BAXTON, Esq., and his agreeable lady, for their kindness and hospitality during our stay among them.

The spirit manifested in the perfect arrangements for the Show, the products of all kinds presented, and the great number of persons attending, were sufficient evidence that the farmers in that portion of the valley of the Connecticut are not on a standstill point, but are progressing in substance and intelligence, and will undoubtedly find their comforts and profits increased by this special attention to the great farming interest.

THE HUMAN SYSTEM.

It is established by chemistry, that there are seventeen elementary substances in the composition of the human body. More than nine-tenths of the whole bulk of the system is composed of four gases which are invisible when in a free and uncombined state, viz.: oxygen, hydrogen, carbon and nitrogen. Besides these substances, there is, in every full man, enough phosphorus and sulphur to tip a gross of friction matches; enough potash, soda and lime, to form a lye sufficiently strong to bear up half a dozen eggs at once; enough iron to make a good-sized penknife-blade; enough of flint to load the cock of an old-fashioned "Queen's arms;" and enough copper to give a flea a heavier burthen in proportion to its size, than was ever borne on the back of a camel.

The entire body, that part of it which possesses vitality, is but a collection of cells, each one of which is a mere round, pearl-colored bag, filled with fluid, and far too small to be seen with the naked eye—so small are they, in fact, that 12,000 of the smallest of them could be strung upon a single, inch in length of the thread of a spider's web.

All the bones, before birth, are soft, like jelly; only six of the two hundred and forty-six which we find in an adult being fully formed, or ossified, at birth; these are the bones of hearing, three in each ear.

Every bone in the body is in immediate connection with some other bone, except the hyoid bone, which is situated at the upper part of the wind-pipe, just under the lower jaw. Its length is about two inches; but twenty-two muscles, seven ligaments and one membrane are attached to it.—More than one-half of the substance of the bones is composed of phosphate of lime, that substance about which so much has recently been said as a remedy for consumption. Some physicians appear to have just discovered that phosphorus composes a part of the human system, although the more scientific members of the profession have long used it with great advantage, especially in chemical union with iron.

The muscles of the human system are somewhat over 500 in number. Some of them, as on the back of an adult, are 27 inches in length; and some, as in the ear, are not over a fourth of an inch long. Muscle is termed *lean meat*. Muscle is divided into fibres; and if we take the smallest of these fibres which can be seen by the naked eye, and place it in the field of a powerful microscope, we shall find that it is in itself a bundle of minute fibres, each of which is not more than a ten thousandth part of an inch in diameter, and some of them are even less than half that size. A rope formed by twisting fifty of these fibres together, would be too small to be seen by the unaided vision. Could we unravel the fibres of a single cubic inch of clear muscle, they would be found to stretch out over 6000 miles in length. Could all the muscular fibres of an adult be placed in a continuous line, they would form a thread which would reach more than 400 times round our globe, or over 10,000,000 of miles. Chemically examined, dried blood and dried muscle are found to be precisely the same.

The little glands which produce the sweat are situated just beneath the cutis, or true skin. Each gland sends up through the skin a little tube,

about a quarter of an inch in length, through which the sweat is poured out. These glands number about 2500 in a square inch of the palms of the hands and soles of the feet, and about 2800 in a square inch of the remainder of the surface of the body. The total number of pores, therefore, in the human body is about 7,000,000, and the total length of the tubes through which the sweat is poured out, is nearly 28 miles.

The weight of the brain and spinal cord of the male ranges between 46 and 63 ounces, but that of the female is often found as low as 41 ounces, and very seldom higher than 47 ounces. In man, one thirty-sixth of the whole is brain, yet it receives one-sixth of the blood of the entire system. Surrounding, and within the convolution of every healthy brain, there are about two ounces of water.

The process by which sound is communicated to the brain, is very curious. The ear is divided into three parts—external, middle, and internal ear—first, there is the external ear, or porch to the house in which sits the god of listening. Every sound, as all very well know, spreads it out upon the air in an undulatory or wavy manner, just as when we cast a stone into a stream, certain waves are produced, which spread out in constantly widening circles. This wave in the air enters the ear, and raps, as it were, upon the little door called the *membrana tympani*, which is situated at the bottom of the external ear.

Within the middle chamber, and on the inner side of this door, stand those three little houses, which act as servants in the hall, to communicate the message to the brain. No sooner, then, does the sound rap upon this door, than the malleus, or hammer, the handle of which is fastened upon the inner side of the door, strikes a blow upon the anvil. The anvil throws all its burden into the bone called the stirrup, to which it is fastened. The stirrup itself is fastened by a ring to the oval window which opens to the internal ear, to vibrate, and thus tell the story to the nerves which surround it, and through them it is communicated to the brain.

BEDFORD CATTLE SHOW.

We passed a few pleasant hours with our neighbors at Bedford on Thursday, the 30th September, in looking at their Exhibition of the fruits of the farm. The day was one among the pleasantest of our unsurpassed autumnal days. There was a creditable display of cattle, swine, poultry, fruit, vegetables, domestic manufactures and fancy work. They had a plowing and drawing match, and all the other accompaniments usual at the county shows. The address was by the Hon. J. T. BUCKINGHAM, of Cambridge, a gentleman whose zeal in all that relates to the farm is always active, and whose skill in the culture of fruits is scarcely surpassed by the most enthusiastic votaries of Pomona. His subject was, *Yankee contrivance and persistence*, which he handled, with ease and ability. The dinner was a good one, and served in good style, and the "table was set in a roar" more than once by happy hits of the toast-master, the Rev. Mr. CUSHING, of Bedford. There were also

many pretty faces, as well as happy ones, among the ladies which graced the festive board,—a far better seasoning on such occasions, than "caper sauce or cayenne." The old song had it that "women and wine" went together—but they have driven out the wine, and we don't see but the wit sparkles just as well as ever. The President made appropriate remarks, and was sustained by the Chief Marshal, and others who made lively and interesting speeches. Upon the whole, as a single Town Show, the Bedford farmers will be found "hard to beat."

For the New England Farmer.

CARROTS—SWEET CORN—STORE SWINE.

MR. EDITOR:—I am of the opinion that no department of an agricultural journal is more profitable, than that which is devoted to the answering of questions from practical farmers. These answers are usually concise, practical, and to the point.

If you agree with me in this view of the matter, you will perhaps be so kind as to answer, through your monthly paper, some few questions which I have to propose.

1. I would inquire how carrots affect the soil on which they are grown? or in what condition they leave the soil for a corn crop?

2. How does sweet corn affect the soil on which it is raised? Has it been tried as food for stock, and if so, with what success?

3. What food is most profitable for the winter feeding of store swine?

4. I have heard of experiments in raising corn for many years in succession upon the same land, with no manure after the first year, except what was left after removing simply the ears of the preceding crop. I should like information in regard to the policy of attempting to raise corn in this manner, upon lands at a distance from one's manure-heaps.

5. I was much interested in the article of your associate, Mr. HOLBROOK, published in your June number. The results of his experiments in deepening his soil seem to have been very satisfactory indeed; but I fear that many farmers would reap a large share of disappointment, should they anticipate equally good results from a similar course of treatment toward their lands. It has occurred to me that Mr. HOLBROOK may cultivate some of the Connecticut River flats. If such is the case, his "sandy loams" may differ materially from some which might be pointed out in other parts of New England.

6. Many articles lack much of the value which they might possess, were they but slightly more specific. I think, however, that Mr. HOLBROOK's articles may generally be taken as models in this respect.

An early response to the above would be thankfully received by Yours, &c. H.

Valley Farm, N. H., Sept. 16, 1852.

REMARKS IN REPLY TO INQUIRIES BY "H."

1. The carrot exhausts the soil as little as any crop commonly raised; its tap-root strikes deep, drawing a good portion of nourishment from

beneath the range of the roots of most other crops, loosening and dividing the soil deeply; the cultivation it requires is of a kind to keep the surface of the land mellow, and free from weeds; the harvesting also mellows the soil, and it is left in a clean, superb condition for a succeeding crop, whether of corn or other field crop.

If you wish to raise a large crop of carrots, at the least practicable expense, you will be likely to best attain your object by selecting a warm loam, deep and fertile, and thickly swarded with grass. Manure and prepare the land in either of the two following ways; spread twenty loads of green manure on the grass, and plow nine inches deep, in the handsomest style of the art, then spread twenty loads of fine compost on the inverted furrows, and harrow and cross-harrow until the manure and soil are finely pulverized and intimately mingled to the depth of three or four inches;—or, first plow handsomely, this fall, nine inches deep, or deeper if the land will bear it, letting the furrow-lices remain through the winter as laid by the plow, exposed to the action of the atmosphere, and the last of May following, spread forty loads of compost, of say, thirty to thirty-five bushels, each, then harrow so as to distribute and pulverize the manure and loosen the surface of the land, then plow lightly four or five inches deep, and harrow lightly after plowing. Sow your seed in drills two feet apart, which is as near as is convenient for after-cultivation. By no means put near the surface manure containing the seeds of grass and weeds, in a state allowing of germination; for it will subject you to additional and unnecessary expense; but rather apply old compost, in which the vitality of all seeds is destroyed, and where the salts of the manure are fully developed and prepared for immediate influence. Whatever grass or weeds do spring up, should be attended to very soon after they appear, for thus you may subdue them with much less labor than at a later period, when they have got firm foothold. Your ground thus selected and prepared, will not be half so weedy as stubble or old ground; the decomposing sod beneath will keep the earth up light; the tap-root of the carrot will easily penetrate the sod, these finding moisture and food for the crop in the latter stages of its growth; and if the season is tolerably favorable, you will harvest a great quantity of carrots. If you wish to raise the stoutest corn in the neighborhood, spread a good coat of manure on this carrot-field, in the spring, and turn it under five or six inches deep, with a light plow, still leaving the decaying sod beneath, and plant with corn. The corn-roots can then range deep and wide, at will, finding abundant nourishment wherever they go, and if the season is propitious, you will probably harvest a great crop.

2. The effect produced upon the soil by a crop of sweet corn, is not materially different from that by crops of other varieties of corn. If sweet corn is gathered before the ear is filled, or mature, the land will be much less exhausted than if the crop is matured; and so of all other corn. Sweet corn makes an exceedingly valuable crop, exhausting the land but little, when sown broadcast or in drills, and cut up from day to day in August and September, and fed green to milch cows, at a time when pastures are dry and short; or cut up early in September, and cured in shocks for winter fodder; or planted in hills, in the usual way, the

ears picked green, and boiled with vegetables, or alone, and fed to fattening swine, and the stalks fed green to the cows, or cured for winter fodder. Large early ears of sweet corn, pretty well matured, and picked, braided together, and hung in a dry airy place, may in the winter be shelled, ground, and prepared for those rustic and truly excellent Yankee dishes, known as "hominy" and "fried hasty pudding," being superior to all other corn for these purposes. Milch cows, fed in the winter upon part hay and part the cured stalks of sweet corn, will give more and richer milk, cream or butter, than if fed with hay alone.

3. Store swine are cheaply wintered on cooked vegetables,—such as cabbages, ruta bagas, beets, pumpkins, squashes, carrots, small potatoes, apples, &c., &c.; and if these articles are mingled and cooked together in good variety, the appetite, thrift, and growth of the swine will thereby be greatly promoted. It is a common error with farmers to set too small kettles for this business of cooking vegetables. It is far better to provide a good large cauldron, one that admits of a mixture of various articles, and will at one heating cook a goodly quantity of food. Boiled or steamed carrots furnish very nutritious and healthy food for store swine; and for breeding sows they are particularly valuable, giving strength and thrift without fattening them too much, and promoting a full flow of milk.

The most precise and extensive arrangements for growing and fattening swine upon cooked food with which I am familiar, may be seen at the farm of LEONARD STONE, Esq., Watertown, Mass. He purchases at Brighton market, each spring and fall, 50 to 60 shoats, weighing about 100 lbs. each, feeds them six months, then slaughters and sells them in Boston, when they weigh from 275 to 300 lbs. each, dressed. He has a cauldron holding 600 gallons, set in an arch. Into this, in the summer and fall, he puts the various refuse vegetables derived from his market gardening,—such as cabbages, melons, apples, potatoes, beets, carrots, tomatoes, squashes, pumpkins, cucumbers, mangoes, green corn in the ear, &c.,—the greater the variety the better, over the whole spread six bushels of meal, the contents are then boiled, and before feeding, are mashed and mixed up together. For the last six weeks before the hogs are slaughtered, they have an increased proportion of meal, to fatten them highly and harden the meat. The winter swine are fed in like manner, with all such vegetables as will keep in the winter,—such as carrots, potatoes, ruta bagas, beets, &c.

4. I am not familiar with any experiments in raising successive crops of corn on the same piece of land, without manure after the first year, carrying off only the ears of corn, and giving back the balance of the product to the land. I cannot therefore give you precise information in regard to the policy of such a course of tillage; but will say, as my theoretical opinion, not fortified by practice, that such a course would probably not prove good farming. Although by annually returning to the soil the root, stalk and leaf of its product, the deterioration might be gradual, yet it would probably be sure, because that other portion carried off, namely, the matured seed, would be precisely the portion which would cost it the greater effort and sap its fertility the most to produce. Mother earth observes a law of rotation in her

productions. Different crops in kind, draw differently upon the fertility of the soil for their support, draw contributions differently from the atmosphere, and of course, the portions of fertility, which they leave unrobbed in the soil, and those which they return in their roots, and in their stems left after harvest, are more or less different in amount and kind. Generally speaking, therefore, a given amount of manure and labor, bestowed upon land under a rotation of crops, will produce greater and more profitable results than upon the same land, bearing one kind of crop in succession.

"Lands at a distance from your manure heaps," may be kept productive, with but little manure, by turning over the sod in the month of August, every fifth or sixth year, seven to nine inches deep, manuring the inverted furrows with 15 to 20 loads of compost per acre, harrowing it in, seeding immediately to grass, without grain, the next two years mowing them, and the remainder of the time pasturing them. Or by putting on more manure, they may be mowed every year. Perhaps you can contrive to haul the manure necessary for such lands, in the winter, by sledding, piling it in large heaps on the field where it will be wanted the following August. Lands managed in these ways will continue fertile longer with the same manure than by almost any other management, because the sward formed on them returns a great amount of vegetable matter to the soil when turned under to decay, because the annual product of grass being removed before the seed is matured, but moderately exhausts fertility, and because, further, if pastured a part of the time, a good share of the manure-droppings are left on the ground.

5. I am pleased to learn that my recent communication in the *Farmer*, upon *Deep Plowing*, interested you. I have derived great advantage from a gradual deepening of my soil, and am entirely certain that others may reap a similar reward, notwithstanding the fear you express that many farmers would only meet with disappointment, should they attempt a like process. Nineteen farmers in twenty, at least, seem to be frightened almost out of their senses at the sight of a little yellow dirt on top of their inverted furrows; and one of the last things you can persuade them to do, in the way of change or improvement, is to put their plow an inch or two deeper in the ground than they have before plowed. But, however singular it may seem, I fearlessly advance the proposition, to you and to every body else, that nearly any and all lands that have heretofore been plowed shallow, may be improved every way by a gradual deepening of the plowing, accompanied by liberal manuring. The soils or lands that furnish exceptions to this statement are of extraordinary, and not of ordinary occurrence. It is true, as you surmise, that a part of the land I cultivate is Connecticut river intervalle; but a greater part is sandy and gravelly upland loam; and on the latter the deep plowing gives a greater improvement than on the former, because the surface soil is naturally much thinner and more susceptible to the influence of drought, the subsoil is a cold, sour, compact and inactive mass, with which the roots of the crop will have nothing to do, until it has been thrown up to the warmth of the day, and improved by the atmosphere, by manure and fine cultivation. I have been a pretty extensive and close observer of other men's farming, and have never

yet met the man who, having once commenced a judicious deepening of the soil, accompanying it with a generous application of manure, would be willing to go back to shallow plowing. I advise you to procure a plow at once that will turn sod-furrows ten or twelve inches deep. Such a plow will of course work well in furrows eight to nine inches deep, and will be better to those depths than your little light bobbing things that can hardly stand up straight in furrows six inches deep, and are knocked out of their work by every little obstacle they meet. Hitch four cattle to your new plow, and turn furrows eight inches deep where you have heretofore plowed but six or seven inches; manure well; and the succeeding crops will probably convince you that they have an advantage over former crops, raised on shallow plowing. Continue steadily in the process of deepening your plowing, until your tillage lands will bear a furrow nine or ten inches deep, and quite likely your barn will then need to be a pretty large one.

6. You cannot appreciate more highly than I do the value of precise specific statements in articles upon agricultural topics. Sitting down to read an article upon some subject that interests me deeply, and upon which I am seeking light, I am sorely disappointed, when some fundamental points, upon which my doubts hinged, are either entirely untouched by the writer, or but superficially glanced at, and I rise from the perusal no wiser than before, saying to myself—this is trash. But when I take up an article where the writer trims and modifies his theories by practical considerations; patiently writes out all necessary details; by careful reflection anticipates the doubts and wants of the reader, stating precisely all the fundamental points bearing upon his subject; I read it two or three times over, ponder it, and am instructed and influenced by it. We ought all to remember that the public has a right to demand of us, that we exercise that patience, reflection and care, when writing for the press, which will give our articles authority and usefulness.

F. HOLBROOK.

Brattleboro', Sept. 28, 1852.

For the New England Farmer.

THE ENDICOTT PEAR.

MESSES. EDITORS:—I send you to-day, some fruit from the old Endicott pear tree, which I received from C. M. Endicott, Esquire, of Salem, one of the descendants of Gov. Endicott, and the author of a very interesting memoir of his worthy ancestor. In regard to the origin of this ancient tree, he informed me that a tradition exists in the family, "that the trees which composed his first orchard, of which this venerable patriarch is the only survivor, were imported, and not raised from the seed, as I had supposed, but that they were packed in boxes, containing earth, and that this was a common way of importing fruit trees, at that period." Yours, S. P. FOWLER.

Danvers, Sept. 18, 1852.

REMARKS.—We are obliged to friend FOWLER, for a look and taste of the fruit from this time-honored old tree. It was brought from England and set out in 1628, and has become an object much interest.

LEAVES FOR COMPOST.

Many farmers regard leaves as utterly worthless for purposes of fertilization. A moment's candid reflection, however, would convince them, we think, of the fallacy of this opinion. How, if leaves are not endued with alimentary powers, do our forests retain their health and vigor for so long a time? or, in other words, why do our woodlands upon which we bestow no care whatever, continue to grow and flourish in increasing vigor, while arable soils, from which the crops produced by manuring and cultivation are annually removed, "run out," and in time fail to remunerate the husbandman for the labor and expense of "carrying them on?" Is it not because the alimentary matter returned to the soil in the foliage is adequate to the demand made upon the resources of the soil by the crop?

The leaf is not merely a vegetable substance.—It contains mineral matters, which are essential to the health of all plants; and these being derivable only from the earth, are returned to it, in part, by the decay of the foliage which rots upon the soil. Let us, for the sake of more fully illustrating the subject, present an analysis of the leaves of a well-known tree—the Early Harvest Apple—the foliage of which was collected Sept. 30th—the tree bearing fruit.

Silica.....	5.775
<i>Earthy Phosphates.</i>	
Phosphate of peroxide of iron.....	4.875
Phosphate of lime.....	1.416
Phosphate of magnesia.....	trace.
Silica.....	5.125
Phosphoric acid.....	5.359
	16.775
Lime.....	36.398
Magnesia.....	0.075
Potash.....	13.179
Soda.....	11.616
Chloride of sodium.....	0.060
Sulphuric acid.....	0.137
Carbonic acid.....	15.200
Organic matter.....	2.850

101.065

Proportions.

Water.....	54.341
Dry.....	45.659
Ash.....	4.194
Calculated dry.....	9.163

The leaf, when analyzed in a mature state, is found to contain a much larger quantity of mineral matter than it affords when young, or newly formed. This is accounted for by the well-known physiological fact that the food of all vegetables—trees not excepted—is taken up in a state of solution. This food passes to the leaves, where it is exposed by aëriation to the action of atmospheric phenomena, and its aqueous parts evaporated, or given off, but not the substances which it held in solution. These are in part disseminated through the entire system, a certain amount remaining in the vascular structure of the leaf itself. These, it has also been ascertained, contain a larger proportion of mineral matter than the wood of the trunk.—The dried leaves of the elm—(*Ulmus Americana*)—contain more than eleven per cent. of ashes, (earthy

or mineral matter,) while the more perfectly lignified substance, or perfect wood, contains only two per cent.; those of the willow, more than eight per cent., while the wood has only 0.45; those of the beech, 6.69, the wood only 0.35; those of the European oak, 4.06, the wood only 0.21; those of the pitch pine, 3.14; the wood only 0.24 per cent.

A late American writer, in an article illustrating the value of leaves as a manurial agent, says:—

"It is very plain from these facts, that, in forests, the mineral ingredients of the soil perform a sort of *circulation*; entering the root, they are deposited in the leaf; then, with it, fall to the earth, and by its decay they are restored to the soil, again to travel their circuit. Forest soils, therefore, instead of being impoverished by the growth of trees, receive back annually the greatest proportion of those mineral elements necessary to the tree, and besides, much organized matter received into the plant from the atmosphere; soils, therefore, are gaining instead of losing. If owners of parks or groves, for neatness' sake, or to obtain leaves for other purposes, gather the annual harvest of leaves, they will, in time, take away great quantities of mineral matter, by which the soil ultimately will be impoverished, unless it is restored by manures."

Whenever leaves can be obtained in sufficient quantities, the farmer has within his reach the most ample resources for sustaining and increasing, *ad libitum*, the productive energy of the soil he cultivates. By accumulating them in autumn, depositing them in yards and other enclosures where they will be in a situation to become impregnated with the liquid voidings of his animals, and thus predisposed to ferment and decompose more rapidly when applied to his lands, he will secure an adjuvant, the beneficial and powerful effects of which will be obvious for years, both upon his soil and the crops it is required successively to sustain and perfect.

For the New England Farmer.

ASPECT OF THE CROPS.

It is your province to catch the manners living as they rise. If by glancing the eye at the products of the season, you can lay the foundation for comparing one season with another, you will do a good service, for all coming time.

Never have I witnessed apples so abundant as they now are, especially the Baldwin. Almost every tree is loaded to its fullest capacity. On many trees, the apples are so numerous, that they are of diminutive size, and of course of inferior quality. An early removal of one-half, would have left the remainder better than the whole.—Other varieties of fruit, such as the Greening, Danvers Winter Sweet, &c., bear abundantly, but not so full as the Baldwin.

Pears are very abundant, and of fine quality.—We have heard it said, that the Bartlett pear was failing;—but we do not remember to have seen them handsomer than the present season—where the trees were not overloaded.

The crop of Corn promises to be very good, and is in fair way to ripen well. We have seen one

field, where the hills were on an average 3 1-2 feet apart each way—giving 12 square feet of land to a hill—where the yield would be 6 ears to a hill, of the largest eight rowed corn—ears averaging one foot in length, well filled out; this gives one ear to each two feet of land. We have made no experiment to determine the exact product—but think it will compare well with the best Plymouth corn—which we have never believed, under fair management, exceeded one hundred bushels to the acre. Sixty bushels to the acre is a good crop; more fields fall short of, than overrun this amount. Even this, when viewed in all its bearings, makes the corn crop one of the best our farmers can raise.

Potatoes are much tainted. The yield is moderate, and many of those grown soon decay. We have seen very few specimens of the *genuine rot*; the crop, as a whole, is moderate.

English Hay, although it was estimated to fall short twenty-five per cent. in weight of an average crop—still where the quality of the hay is considered—and the present promise of a second crop, we think there is no reason to fear any considerable deficiency. On Mr. J. How's farm, in Methuen, we saw, last week, ten acres together, where the second crop will be very little short of a ton to an acre. Mr. How's pastures, by means of about two bushels of plaster applied in the Spring to the acre, appear as green and flourishing as they did in June. If any one wishes to witness farming carried on in a manner that will pay, let them call on Mr. How. Few men move in their labors with less ostentation, or more intelligence. Everything about his grounds shows indications of good sense.

P.

Sept. 25, 1852.

REMARKS.—We thank friend "P." for placing in our hands what he suggests, that it is our "province to do." It is also his to do the same, and well has he done it, many times. We can assure him, that with a heart entirely devoted to the cause in which we are engaged, we often have strong realizations of our deficiencies; the very magnitude of the labor before us sometimes becomes oppressive,—and were it not that we find other willing hearts and hands, in the frequent favors of friends, the labor would be still more onerous and discouraging.

COUNTY CATTLE SHOWS.

These take place in such rapid succession, or, in some instances, two or more on the same day, that we find it difficult to find time or space to give them that attention we should be glad to. But we shall give the leading events of them all as fast as possible.

WORCESTER COUNTY SHOW.

Worcester County did itself no little credit last week, by its Agricultural Exhibition. The working oxen, milch cows, and neat stock generally, were of superior quality, and prove that the intelligent farmers in that section of the State have taken much pains to introduce the best breeds. The Ayrshires and Durhams were numerous. Of Devons, but few were presented, and we have of-

ten seen finer specimens of that breed than any which were on exhibition. The display of swine was not remarkably good. In that article, the counties bordering on Boston hold a decided pre-eminence.

The Horticultural Exhibition was very fine. The pears and apples would make any man's "mouth water." Gov. Lincoln presented several specimens of apples, which would do honor to any garden or table. We noticed several mammoth squashes, any one of which would apparently serve a family for the winter.

The address, at the dinner, by Prof. Mapes, was admirable for its simplicity and practical character. Every farmer, of whatever degree of "book learning" could easily understand him, and we have no doubt, that many of his excellent suggestions will be reduced to practice next year by the agriculturists of that county. The occasion drew together an immense assemblage of the farmers and their families from all parts of the county, and their intelligent, hale and healthy appearance showed that the "heart of the commonwealth" is in a sound condition. The perfect order and decorum which prevailed, both the last and present years, speaks well for the moral habits of the people.

For the New England Farmer.

BROOM CORN, (SORGUM SACCHARATUM.)

Though the cultivation of this crop is very limited, I have thought some suggestions relative to its culture and productiveness might be acceptable to the readers of the *Farmer*.

Till about the year 1830, the cultivation of broom corn was confined almost exclusively to the Connecticut river valley. It gradually extended thence to the valley of the Mohawk and to New Jersey. And now it is produced, in great abundance in Ohio, Michigan, Indiana and Illinois; also in Pennsylvania and to some extent in Maryland. In New England, however, it is still confined to the banks of the Connecticut, comparatively, to a very small territory. Northampton, Hatfield, Whately, Deerfield, Northfield, Montague, Sunderland, Amherst, Hadley and South Hadley produce, probably, four-fifths of all that is raised in New England.

Two causes have conspired to produce this result. 1. The plant requires a peculiar soil and will flourish in no other. 2. Its cultivation and manufacture demand a regular apprenticeship.—Rich alluvial, with sand liberally interspersed, seems best adapted to its growth. It requires a long season, and is an uncertain crop north of the north line of Massachusetts. In its culture there is nothing really difficult. But it requires a course of treatment so different from that bestowed upon Indian corn, that no one will succeed in raising it, without first learning the trade.

The ground should be prepared as for Indian corn. Nothing more is needed. Let me not be misunderstood. For Indian corn, the ground should be so prepared, as to ensure, in a good season, fifty bushels, at least, per acre. But far more

acres in New England, produce less than fifty, than that, or more. Now ground that will not yield that amount is not in a condition to be planted with broom corn. To give the brush the requisite length and firmness, there must be strength in the soil. Most cultivators manure in the hill, and, till very recently, no one thought of raising broom corn in any other way. The plant, in the early stages of its existence, is very frail and of slow growth. It has been thought that the warming and invigorating influence of manure, in immediate contact with the radix, is indispensable to the development of the plants. The roots, unlike those of Indian corn, cluster together in form of a distaff or *seem* to draw nourishment but from a limited space. Hence the inference, that manure, to be serviceable, must be placed directly underneath the plant. I think it bad economy to manure in the hill for any crop. I would never manure for the crop directly, but for the soil. I regard this as a ruinous practice. The lawyer who entirely flays his client to-day, will be without a client to-morrow. The farmer, who cultivates with special reference to immediate results, will ere long fill his barns with emptiness. The best fields of broom corn I have seen, this season, were prepared and planted in the way I have indicated. The manure was spread and plowed in, and the seed planted with a corn planter. This is highly important, as there may be saved thereby at least one-third of the expense of cultivation. The old mode of furrowing, dropping the manure from a hod or planting by hand is tedious and expensive. Now for the process. The land should be carefully prepared and reduced to a fine tilth. If ashes, plaster or guano are to be applied, let them be sown broadcast, and covered by harrowing. In selecting seed, regard must be had to the nature and condition of the soils. There are three well-known varieties,—differing only in the size of the stalk and the length of the brush. If the soil is in a high state of cultivation or in a position not exposed to early frosts, the largest variety may be used. If, on the contrary, it is poor, the smallest variety should be selected. Except in these extremes, the medium size should be preferred.—The rows should be three feet apart,—the hills in the rows two feet, and the number of stalks not less than seven, nor more than ten. In planting, the number of kernels deposited should be at least twice as great as the number of stalks to be permitted to stand. This is found necessary to provide against loss from imperfect seeds and from insects. In the early stages of its growth, the plant is very frail, and requires to be handled with care.

At the first hoeing, which should be performed soon after the rows may be distinctly seen, the earth should be carefully removed from the stalks and fresh earth supplied and all the plants permitted to remain. At the second, the pruning process should be performed. If more stalks are suffered to remain, than named above, the brush will be short and worthless. Should be hoed, at least, four times. Like Indian corn, it should, I think, be hoed plain. Why not make hillocks about fruit and forest trees, proportionate to their size and height, as well as about the corn stalks?

When the seed becomes hard, the harvesting may be commenced. Two modes are in use. 1. To cut the stalk near the ground, and lay it length-

wise in the furrow, and subsequently to cut the brush and spread upon the stalks. The object of this is to put the stalks in a condition the more easily to be covered. If buried, while green, they will be decomposed in the following season.

2. Tabling, as it is called, that is, breaking the stalks of one row across another, so as to form a kind of table, upon which the brush is spread to dry. This is the most convenient mode of harvesting, if no regard is had to the disposal of the stalks. The stalks in the latter case, are cut the following spring, thrown into heaps and burnt. These stalks and leaves are worthless as fodder, and, if permitted to become dry are nearly as indestructible, by atmospheric agents, as walnut hoop-poles.

R. B. H.

EULOGY ON MR. DOWNING.

We have risen from the perusal of this eulogy with mingled feelings of pleasure and pain; pained at the horrible manner in which such a man lost his life, and pleased that so judicious a choice has been made of his eulogist; pleased that the writer paints in vivid colors the *life of the man himself*, seizing upon its incidents with wonderful freshness and force, and placing him again before us in perpetual remembrance. Not as scattered through his writings, but in this condensed form, we see the objects of his life and labors in a thousand different and pleasant forms all over the land; an object and labors that "conferred inestimable benefits on rural life; that elevated and improved every branch of its economy, and gave an ample affluence, and a more luxurious value to the bounties of nature; that imparted variety to abundance, added elegance to comfort, and threw a new and magic charm over country enjoyment, by refining its occupations into grace, and softening its aspect into beauty."

While reading, we intended to select extracts for our own pages, but could not do it. There is no broken link in the chain of events related; no turning aside for collateral and minor points, but an unostentatious narration of that beautiful life so full of manly energy and usefulness. Beautifully and eloquently has the writer performed his task, catching the lovely spirit of his subject, and employing with felicity the images and expressions suggested by the eloquence of country life.

The eulogy, then, is admirable, because it is life-like—a descriptive likeness of the man—and when this task was done, the eulogy was done. It is a model in this respect.

Mr. Downing was a member of the American Pomological Congress, and this body selected the Hon. MARSHALL P. WILDER, of this State, to pronounce the eulogy at its recent biennial session, at Philadelphia. As we have said, we cannot make extracts—there is nothing to be omitted, or added, and we shall publish it entire, which we are confident will meet the approbation of our readers, as we shall then have it in our monthly in a form to be preserved.

*For the New England Farmer.***RURAL ART AND TASTE.**

I have this day read the eulogy of Hon. M. P. WILDER, on Mr. A. J. DOWNING, whose melancholy fate we all know. I have also noticed today in the New York *Christian Inquirer* the following short but beautiful tribute to his memory.

"One there perished in whom the nation mourns a benefactor; whose life was a mission of beauty to his countrymen; a hero of that pacific order and white-handed chivalry, whose enterprise is to create and not to destroy. The sweet influences of his tasteful combinations have awakened a new spirit in our people, and are giving a new aspect to our landscape. On many a green slope, by the winding river's bank, in the forest glade, on the breezy upland, he has left memorials of himself which shall speak to the generation following of his healthy aspirations and his honored name."

From looking at his character, and considering what great improvements in our rural taste and architecture have been the result of his persevering genius and love of rural life, and all its highest and holiest accompaniments,—I am deeply impressed with a sense of his great loss. Although he stood high, as a gentleman of elegant taste, yet we trust, the very spirit he awakened, will soon bring up others who will make his place good. I have been reading an English work just published by JOHN CHAPMAN, London. Its author is, JOHN LALOR, and its title "*Money and Morals*," and I there find the following passage, descriptive of English landscape, and beautifully expressive of the *real value* of rural scenery.

"Our survey of rural attractions is, in fact, an estimate of the most important part of the fixed capital of England. By far the greater part of the beauty which the poets and artists love, has been gradually produced by the efforts of innumerable laborers. Generation after generation, they have silently passed on, leaving this monument behind. The oaks and elms rear their lofty foliage, the hedge rows bloom, the pastures in which the cattle are half hidden, spread out their rich expanse, and the fields of golden grain are waving, where swamps and barren wastes alone were seen before the hand of man began to call forth the hidden riches of the soil. This is no dream of the fancy, no imagination of the poets. It is the plain statement of the stationer.

"The distinguishing peculiarity in the aspect of the country is, however, the exuberance of its vegetation, and the rich luxuriant appearance of its lower and far more extensive portion. It owes this distinction partly to nature and partly to art. The humility and mildness of the climate, maintain the fields in a constant state of verdure; in winter they are seldom covered with snow or blighted by long continued frosts, and in summer, they are rarely withered and parched by droughts.

"In this respect, England is as superior to the finest countries of continental Europe,—to Italy and Sicily, for example—as she is superior to them, and to every other country, in the amount of labor that has been expended in beautifying, improving and fertilizing her surface. It is no exaggeration to affirm, that thousands upon thousands of millions have been laid out in making England what she now is. In no other nation has the combination of beauty with utility been so much regarded.

Another peculiar feature in the physiognomy of England, is the number and magnificence of the seats of the nobility and gentry. These superb mansions, many of which are venerable from their antiquity, and all of which are surrounded with fine woods and grounds, give to the country an appearance of age, security and wealth, that we should in vain look for any where else. The farm-houses and cottages have mostly also a substantial, comfortable look; and evince that taste for rural beauty, neatness and cleanliness, that eminently distinguish their occupiers."

Mr. LALOR proposes an additional loan to English agriculturists, by government. He speaks of it as the true way to foster the depressed state of agriculture and as more important than the further extension of mines or work-shops. He says they have two things, capital and the field of employment, "but they stand apart, and whatever political economy may assume, the chasm between them is not one that private interest will bridge over. No, the capital, if left to itself, will go to bruise quartz rock in California, or possibly to construct railways in the Celestial Empire, rather than to drain cold clays on the banks of the Thames, or quicken the languor of the vale of Taunton."

An infusion into our great community of the taste which Mr. Downing possessed in such an eminent degree, and which he had done much to impress upon others before his premature death, together with the fostering hand of our government, although they cannot for generations to come give us the antique appearance of our good old mother country, or give us that humidity of climate by which she is perpetually enrobed with living green, can, in a comparatively short period, make us the most productive, and perhaps, in the course of time, the most beautiful country on the face of the globe. Think of the vast expanse and richness of our Mississippi Valley. There we have a substantial foundation, and by its cultivation and embellishment we may possess an aggregate of agricultural wealth—a fixed capital of rural attractions,—which has never been equalled, and which, while it affords bread to all, will furnish, by its boundless expanse, and by the inspiration of its rich imagery, intellectual food and refreshment to the scholar and the poet, giving a majestic power to the production of the former, and a calm and tranquil beauty to those of the latter, down to the latest generations of men.

By the general diffusion of education, combined with rural taste and the democratic principle of distributing the wealth of our country, we may hope to mingle with our rural beauty a moral aspect which shall far exceed that of any other country in this or any other age—the aspect of "*A HOME FOR ALL*." In England and many of the old countries at this time the condition of agricultural laborers, or a large portion of them, is truly deplorable. They have had "no hope" (or but a faint one) "to rise," and "no fear to fall," for they have been to the very lowest depths of poverty, ignorance, destitution and wretchedness. *A home for all, and all worthy of a home.* This should be the aim of our institutions to effect, that it may be the burden of the song of our poets to celebrate. Thus may our moral and rural imagery bring up the Homans of America to sing not only of the "stately homes," but of the more *homely* abodes and the

rumors of the less favored of our land, and to tell with truth as well as with song—

"How beautiful they stand,
And their tall ancestral trees,
O'er all the pleasant land."

Boston, September 25th, 1852.

W. R. D.

REMARKS.—We thank our correspondent for this communication, and hope to hear from him again. He has touched upon pleasant things, and stated facts that ought to be well pondered. "*A Home for all.*" If that single idea were impressed upon our people as it ought to be, it would change the face of the country, and do more for suffering humanity, more towards elevating us in the scale of being, than all tariffs, corn-laws and free-trade principles that were ever suggested. We sincerely believe that more suicides grow out of that anticipation—the want of a home—than from all other causes combined. Believing this, we were in favor of a homestead exemption bill, and thank God that one step has been made towards securing a pittance at least, to the honest, but unfortunate among us. When our social organization becomes sufficiently perfect to give a home to all who deserve it, one-half of the crime and wretchedness of the land will cease.—Wealth or a competence at least, not only leads to honors and distinctions, but saves its possessor from a thousand temptations to which the poor are constantly exposed. We say, then, in the noble language of our correspondent, "the aim of our institutions should be to MAKE A HOME FOR ALL WHO DESERVE IT."

For the New England Farmer.

RAISING AND SALE OF MILK.

MR. EDITOR:—Knowing that the interest, honor, and success of the farmer is what you desire to promote, I ask your attention, and through you, that of the farmers generally, to the subject, that heads this article.

The raising and sale of milk is an important business, requiring honesty, and promptness by all concerned, and all engaged in the business should be fairly compensated.

While I hold that all should receive an adequate compensation for labor and capital invested, I contend that no exorbitant price should be paid upon an article of food so indispensable as is milk to every family, rich or poor; therefore, it should be afforded to the consumer at the lowest possible rate, and pay the farmers for raising, and those engaged for distributing it.

Does it pay a fair profit? that is the question.

It is admitted by all that I have conversed with, that it does not; they say, there is nothing made by raising and selling milk for 2 1-8 cents per quart in summer, and 2 6-8 in winter, which is about the average for railroad milk; (those that sell to retailers get a trifle more.) Who is to blame for these low prices? Most certainly none but the farmers themselves, for if they consent to take meekly the price fixed by the purchaser, they must expect to sell without profit.

A year ago, I was a consumer of milk in Boston, and paid 5 cents per quart for it. Now I do not

find fault with the price I had to pay for it, and should not, if it had been more, but I could not but think of the farmers who raised the milk, and received 2 1-8 cents per quart, cleansed the cans, and warranted the milk to keep sweet until it was sold, and received such disproportionate pay. Is it right that nearly 3-5ths of the price of the article should be consumed in its commerce.

Let us take a case, say, six farmers, with a capital of fifteen thousand dollars in lands, barns, and stock necessary to raise 245 qts. of milk, which is about an average retail route, and they receive for the milk \$5.82 upon the average. Thus, the farmers get five dollars and eighty-two cents for capital invested, and the labor of at least five men to keep it a going, while the retailer, with a small capital, say three hundred dollars, and himself not more than half or two-thirds of his time employed, gets, after paying transportation, &c., five dollars and thirty-eight cents, within forty-four cents of what the six farmers get with all their capital and labor. I would not be understood as saying, that those engaged in its commerce get too much, but this much I do say, the milk raisers do not.

What I desire is, that inasmuch as the hens have had a meeting, and as rumor hath it, have agreed to lay no more eggs for less than a cent a piece—so the cows, at their gatherings, which are now taking place, should agree to give no more milk at present prices, and then the thing would be changed, from a non-paying to a paying one. And I would suggest, that a convention of milk raisers and farmers interested in the subject, be held, and the matter discussed. Will some of the milk raisers communicate through the columns of the *N. E. Farmer* their views upon the subject.

Concord, Sept., 1852.

H.

REMARKS.—We "make" milk for the market and sell at about the prices mentioned above, but think them too low, particularly at the present high prices of all kinds of feed. Whether those who collect and sell milk to the retailers receive an undue share of profits or not, we do not know, because we have made no investigation of the matter; nor do we know how much the retailer gets as his share of the profits. But this is plain—seventeen cents for eight quarts of good rich milk is a very low price. To keep sweet cans, milk and put up that amount, costs no small part of the sum received. Farm products, generally, we admit, are high, and we wonder how the mechanic, after the time lost in sickness, and other ways, can manage to support a family with the present rates of wages. Our sympathies are certainly with them, and it may be that we get prices high enough as an average on all we sell.

MIDDLESEX AGRICULTURAL SOCIETY.—The officers of this society elected at the Annual Meeting in Concord, on the 6th inst., are as follows:—for

President, E. R. HOAR, Concord.

Vice Presidents, { O. M. WHIPPLE, Lowell.
J. S. WETHERBEE, Marlboro'.

Secretary, SIMON BROWN, Concord.

Treasurer, JOHN S. KEYES, Concord.

MORRILL'S PATENT DITCHING MACHINE.

This engraving is a perspective view of a machine for digging ditches, invented by JONATHAN W. MORRILL, of Hampton Falls, N. H., who has taken measures to secure a patent for it.

A A are the wheels; B is the axle of the same, across which the beam lever, C, is secured. The cutters for ditching are placed and secured in this lever. D D D are the cutters for cutting the sides and front edge of the sods. These cutters are united together and are braced and supported by the stirrup brace, E, which has a vertical bar, F, secured to the front edge, and passes up through the slot, G, in the lever, C. This bar, F, has a slot, H, cut in its upper end, with a pin, I, passing through it to make it fast to the lever. As the cutters are raised and lowered, the slot in the bar F admits of the lever, C, being depressed and raised. J is a spade, cutter, or scooper, it has a bent handle, K L, which turns on a fulcrum pin, a, which passes through the bar, F. The part, L, is secured to a link, M, which passes up through a mortice, N, in the beam, and it is loosely secured in the same by a pin, c, which it allows to move back and forth, as the cutters, D D D, and spade J, are depressed or elevated; O P are thin plates of metal for guiding the sod as it is raised up, and for throwing it out at the side of the ditch. The plate, P, is but to incline the sod to the one side.

Two men take their position at the handle of the lever, facing the wheels. They press down the lever, which causes the spade to fly out, at the same time cutting the sod on three sides, then, raising the lever, (without changing their hold) forces the spade in, cutting the sod off at the bottom.

The machine being now at the surface, is brought forward seven inches, when the same operation is repeated, one sod pressing out the other, throwing them upon the side of the ditch. Or the lever can be extended beyond the wheels, a man working at each end.

It will cut a ditch, one, two or three feet in depth, and seven inches wide.

A ditch can be cut fourteen or twenty-one inches wide, by going over the ground twice or three times.

It is comparatively easy work for two men. It is fitted to the large wheels of a single horse wagon.

It may be used to good advantage without the lever and wheels, by having attached to it a piece of wood two feet long, with handles as represented in the small cut. It cuts a ditch smooth on the sides and bottom.

Address JONATHAN W. MORRILL, Hampton Falls, N. H.

For the New England Farmer.

RENSSALAER COUNTY AGRICULTURAL SOCIETY.

We left Berkshire in the morning train of the Western railroad, Sept. 21, for the express purpose of attending the annual exhibition and fair of this Society, held at Lansingburg Sept. 21, 22 and 23, and after a speedy passage of an hour and forty minutes, through a section of country as beautiful and fertile as man need desire, yet suffering in common with other sections from the protracted and severe drought of the present season, we reached East Albany, which, from the great centralization of railways is destined to become a place of great importance in the future business operations of the surrounding country. At the present time, there is a continuous concert of whizzing steam and screaming whistles almost constantly arriving and departing. From this point, there are six passenger trains daily for New York, over the Hudson river railroad, and as many returning, each of which has a liberal compliment of passengers. Then, there are four arrivals of passenger trains daily from Boston and as many departures,—an hourly train between Albany and Troy, which almost connects the two growing cities in fact, as it is fast closing in business transactions.

We were met at East Albany by the Troy train with the steam up, ready to take us to our destination. An agreeable ride of some ten minutes brought us up before the Troy House, whose worldwide reputation for affording its guests with all of food, comfort and quiet that *reasonable* beings have any right to require, stands too fair to need a notice from us, brief sojourners, fresh from scenes of rural life, and soon to hasten to them again.—If any lack information on this point, however, let them, the first time they pass that way, call on friend Colman, and they will realize so much from his kind and gentlemanly attentions, that they will see at once that our power of description is incompetent to shadow forth the praises of his establishment.

Troy is a beautiful city, quietly nestled in the hills by the upper waters of the Hudson, being 136 miles north of New York. River (the principal business) Street extends along the banks of the Hudson for a mile and a half, and is walled in by substantial and extensive ware-houses. Passing back from this street, its collaterals number 1, 2—up to we don't know what number. In ascending Mount Ida, on the east, we saw 8 Street, and looking eastward from it, saw that "the end" of the city "was not yet." Congress Street is the main inlet from the east, and like its parallels, crosses those running north and south at right angles,—thus giving the city a regular and beautiful appearance, which is enriched by the long rows of shade trees, with which they are liberally supplied.

The city has numerous intellectual facilities.—The Troy Female Seminary, founded by Mrs. Emma Willard, has long been in successful operation. The spacious buildings with the park occupy a square between Congress and Ferry Streets—also extending from First to Second Streets. Although other seminaries of similar character have sprung up by hosts all over the land,—yet this pioneer still meets with increasing prosperity, and

at present, we believe, has more students than at any previous term, while the further demands for admittance are so pressing, that it is in contemplation further to enlarge the buildings the coming year. The elder Mrs. Willard resigned the charge of the institution to her son, John H. Willard, under whose care, together with that of his accomplished lady, it merits and receives so liberally of public patronage. Troy Academy and the Renssalaer Institute are located in the east part of the city, and are both in successful operation.

But it is to her free schools that Troy justly turns her eyes with pride, as to the seminaries from which both her sons and daughters are to come forth shining jewels in bright and long array—to swell the tide of the moral and intellectual prosperity, and give her the eminence to which she may nobly aspire. Here, the children of the rich and the poor congregate and drink in knowledge from the same pure and unsealed fountains—and here all the sciences are taught, which are necessary to prepare the recipient for the practical duties of life.

We have understood, that to become a teacher in Troy, the applicant has a very safe and salutary ordeal to pass. The Board of Education has a committee. It is a custom with them, to notify teachers of the time and place of examining these candidates, and the work is put into their hands. After the examination by the teachers, if the committee consider these candidates fitted for teaching, they certificate them; if not, they pass on of course and lay their fortunes somewhere else.

This way of proceeding we consider good, on several accounts. First, a committee may be in every other way qualified for their position and unfit, either from never having known or having forgotten, much in the branches for examination. A person should be every day familiar with these branches in order to draw from others their knowledge of them. It must also keep pace with the improvements in the sciences taught, else he will hardly know where to find them. Few men engaged in other professions can be expected to do this, while it is the teacher's peculiar province. Of course, he should know best of any one what a teacher should know, and how great a faculty he has to communicate it.

Again, an ambitious teacher is and will be anxious for the honor and advancement of his profession. It is of no repute to him, more than any other profession, to have an ignorant, lazy, ungracious soamp in his fraternity. But he will have a high standard, and take a broad and comprehensive view of things, and wish to have his co-workers men of strength, to labor at the oar with him. Of course, if incompetency exists, it will be shown to the honor of the craft and benefit of the rising generation; how far the plan pursued in Troy has been adopted in other places we know not, yet we think it a good one, and worthy of trial everywhere.

From almost every point in Troy, if you look towards Mount Ida, you will notice "the beautiful cottage on the hill"—"Warren's Cottage." The grounds around this establishment made picturesque by nature are laid out in a romantic style of beauty. As you walk over them you have the whole city like a map under your eye—the Hudson cheering you with its silvery countenance, Lansingburgh, with its glittering spires and pleasant homes

away at the right—and Albany, with its towers and domes and busy thousands on the left. One of the most beautiful gardens in the vicinity are found here, also an extensive nursery of fruit trees of the choicest varieties, which we cannot fail to recommend to those in want of such articles.

At seven o'clock on Wednesday morning we took the cars which run in hourly accommodation trains "for the fair." The Society has recently purchased a lot of ample dimensions with spacious and convenient buildings thereon, in close proximity to the railroad for these exhibitions. The lot is without the village, on the east, the surface on the west half of the lot and around the buildings is level and beautiful, while east of them it rises in a gentle acclivity in just such a gradation as to enable everything upon it to show off to the best advantage. Here the beautiful stock of Rensselaer, numbering hundreds, was arranged for the glorious exhibition. The show of horned animals was fine, the horses first rate, sheep and swine good; the exhibition of poultry was very large and varied, and if the exultations of Mons. Chanticleer were equal the *crowing*; the triumph of five hundred roosters must have been complete.

In domestic manufactures, Rensselaer may well challenge competition with any county. To enumerate a tithe of articles presented at this fair would require too much space; a very few things which must, by their peculiar merit, present themselves to public notice, must be glanced at, at this time. We name first the *Iron fence* of Mr. Coon, of Troy. This was exhibited in every variety, from a plain wire fence to the most fanciful and expensive. Although we have from the commencement supposed that wire fences must eventually take among farmers, especially for road fences (if the farmer must be tormented with these ill-looking, expensive nuisances) on account of the little land they occupy, and their permitting the snow to pass off without drifting,—Mr. Coon's fence meets our fancy completely, and if we recollect right, we were informed it would be afforded for \$1.50 a rod, ready for setting—by which we mean, with the wires fitted to the iron posts. When the merits of this fence are known, there is no doubt in our own mind but the demand for it will be unlimited.

Hickock's patent cider mill, to operate by hand power, must be a very convenient article for more uses than one; it will make a first rate cheese press—can be converted by a small change of fixture into a root cutting machine, and how much more we do not know; a mouse trap, so arranged that each mouse it caught retired into a private parlor, always taking care to set the trap to catch his successor, attracted much attention.

The exhibition of fruits, flowers and vegetables exceeded that of any county exhibition we ever attended. It was a luxury to walk through those ample halls and inhale the fragrance of the grape, the peach, the apple and the pear, all combined and redolent with the odor of maturity. It was a rich and rare feast to the eye as well as the smell to enter the court of Flora and see so rich an array of her offerings thrown around in holiday dress.

We have formerly attended several of the fairs of this Society, consequently we feel that we have the means within ourselves of judging of its progress, which we hesitate not to say, is more than

commensurate to our expectations. In their exhibitions the society now stands first of any county society within our knowledge. With the intelligence and perseverance of its members, we have no doubt but it will long retain its position.

Yours truly, W. BACON.

Richmond, Sept. 27, 1852.

DEATH OF JOHN W. LINCOLN.

"Death's shafts fly thick." One after another, in rapid succession, the good, the honored and useful are called from our midst; Downing, Norton and LINCOLN have been suddenly transferred from the fields they so faithfully cultivated here, to others, all yet unknown to us, but to which we also are rapidly hastening. Of Mr. Downing we have frequently spoken. Mr. Norton died at the early age of 30, after having conferred most signal service upon his country, and acquiring a reputation more enduring than monuments of brass or stone. For many years he was professor of chemistry as applied to agriculture, and the phenomena of vegetable and animal life, in Yale College, at New Haven. He had spent two or three years abroad, studying under eminent professors, and had in every way qualified himself to be exceedingly useful in that department of science which he had chosen.

Col. LINCOLN was a man to be remembered; his manners were simple and unassuming and his heart kiadling with kindly feelings for all. He was often entrusted with stations of honor and responsibility, and proved himself faithful in all. Thorough in his operations upon the soil and in his experiments with stock or implements, he encouraged those who were seeking improvements, and was a trusty teacher to point the way. He could work in any harness with the same docile, quiet, but persevering spirit. The pomp of life had no power over his well-balanced mind. He added dignity to labor, beautified what he touched, and left an example worthy of all to follow.

While we cannot but pause and wonder at the inscrutable decrees of Infinite wisdom in removing these lights of the world from our midst, some of them so young, and all so pure and good, and shedding blessings upon the race, let us copy their virtues and press on in zeal to fill the posts they so admirably adorned.

ORIGIN OF WHEAT.—A most curious and able dissertation upon the origin of wheat completely justifies the views we have held; for although it does not show that oats change into rye, as many believe, and offers no support to some other speculations of the same kind, nevertheless it demonstrates, beyond all further question, that wheat is itself a transmutation of a kind of wild grass. M. Esprit Fabre, of Agde, well known to bontanists as an acute observer and patient experimentalist, has made the discovery, which has been introduced to public notice by professor Dunal, of Montpellier.—*Gardner's (Eng.) Chronicle.*

For the New England Farmer.

BIRDS--WILD GOOSEBERRY.

FRIEND BROWN:—I am a constant reader of your paper, and always have been. I would that I could find time to write in it occasionally.

I recollect reading your article on swallows, in which you mentioned their disappearance in the early part of August. That article induced me to observe more carefully the habits of the swallow tribe. On the 17th of August I made a pedestrian trip to Kearsarge Mountain, and remarked several times that the *barn swallows*, (*Hirundo rustica*) were still performing their gyrating flight around the farm houses along the road. I think they did not disappear from this region until the last of the month. And now let me ask some of your ornithologists the difference between the *barn* and *chimney* swallow. I find there is a notion pretty general that there is a difference, but I doubt it. (a.)

The Sandbank swallow, (*H. verbica*), which is really of the Martin tribe, and is called "Sand Martin," by the English, did not leave us till several days after the barn swallow. I observed them as late as the first of September, flying round over the interval of the Merrimac, on the bank of which, nearly opposite, they every year breed in great numbers. They are not "swallow-tailed," and are easily distinguished from real swallows by their markings. Foster says they leave England about the first of October, which season, owing to the difference of climate, corresponds exactly to the first of our September.

I hope your correspondents, in different parts of New England, will observe the habits of this interesting class of birds the coming year. I shall certainly do my part towards bringing their habits into true knowledge, as I have a pretty good opportunity. (b.)

I spoke of going up to Kearsarge Mountain, last August. Permit me to mention that I there discovered a fruit which I think might be cultivated in our gardens. It is a species of the gooseberry—the leaves being the same, the bushes smaller, the last fact owing, probably, to the height at which they grow on the mountain. The fruit is like the gooseberry in size, though entirely thornless, and is of a bright, currant-colored hue. Now, please tell me, whether this fruit is known to you, or whether it has ever been domesticated in our New England gardens. (c.)

Yours truly, C. L. WHEELER.

Concord, Sept. 25, 1852.

REMARKS.—(a.) NUTTAL gives the specific character of the barn swallow as follows:—Above, and on the breast, steel-blue; front and beneath chestnut brown, paler on the belly; tail forked, with a white spot on the lateral feathers, the outer ones narrow and long. And the specific character of the chimney swallow, as sooty-brown; chin and line over the eye dull whitish; wings extending far beyond the tail.

The barn swallow is 7 inches long and 13 across the wings, while the chimney swallow is only 4½ long and 12 across the wings. The tail of the barn swallow is forked and extends considerably beyond the closed wings, while the wings of the chimney

swallow extend 1½ inches beyond the tail, which is rounded. The barn swallow flies with extreme agility and ease, skimming along the ground or the surface of the stream with inconceivable velocity, while the chimney swallow flies comparatively heavily, with a kind of jerk, the body being canted up on one side. There are also other distinguishing marks.

(b.) It is not our intention to make "a hobby" of any particular subject in these columns; but so far as birds, insects and animals are concerned, they all belong to the farm—they people the homestead; and always will, and are worthy of careful observation. Though living in their midst, and calling upon them for their aid, or opposing their destructive habits, we are strangers to them in many particulars still. To the young, this study will have an important influence upon the character through life.

(c.) There is a gooseberry growing wild in the woods, common, we think, all over New England, but it has thorns, and we have never known it transplanted in gardens. Domesticated it. It may prove a hardy and valuable variety.

We are not sure that the writer intended his letter for publication; but wishing to place his observations on record, we have taken the liberty to print.

SCYTHES.

While at Lebanon last week, we looked in at the *Scythe Factory* of Messrs. PERKINS, MESSER, COLBY, & Co., and saw the whole process of making, from the rough bar of iron and steel to the beautifully polished implement. Each scythe passes through the hands of some ten or fifteen persons before it gets the finishing touch. Nearly every part of the work is done by machinery; the forging by trip hammers, the plain bar at first being passed through differently shaped dies until the groove is made along the back and the scythe receives its peculiar form. The beel is also turned by machinery at a single turn of the segment of a wheel. When finished they are bound up in dozens in ropes of straw—the making of the ropes and winding them around the scythes being also done by machinery.

One of the firm of this enterprising company we have known for years as a man of energy and progress. Their scythes stand well in the market, and we wish them large sales and handsome profits.

SPARKLING CATAWBA.—Through the politeness of Mr. SAMUEL S. PIERCE, grocer, corner of Court and Tremont Streets, we have received a bottle of Longworth's Sparkling Catawba wine, manufactured at his vineyard, near Cincinnati. It is a white wine, considerably flavored with the fruit taste, and slightly stimulating. It must be an excellent article in sickness where a light stimulant

is necessary. We believe it a question worth considering, whether the introduction of such wine would not prove an important auxiliary to the efforts for the suppression of intemperance. Whatever Mr. Pierce sells we think will be genuine of its kind.

NORFOLK COUNTY SHOW.

The fourth annual exhibition of the *Norfolk County Agricultural Society* took place at Dedham on Tuesday and Wednesday, Sept. 29 and 30. The weather was favorable, and the rain of the previous night had moistened the surface, keeping down the dust and brightening the vegetation, so that all things looked gay and glad. We were too much engaged in sight-seeing and conversing with the numerous persons we were happy to meet, to take notes, and therefore avail ourselves of the pretty full account of the *Commonwealth*, which very nearly expresses our own view of the appearance of things on the second day of the exhibition.

"At an early hour large crowds of the beauty and manhood of the county, in all kinds of vehicles, as well as by every mode of conveyance, poured into the town; and soon, all around the premises assigned for the different departments of the exhibition, the usual indications of a day of pure pleasure and high gratification were given.

Upon the four-acre lot owned by the Society just southeast of the village, was spread Mr. Wright's beautiful tent, one-half of which was devoted to the exhibition of fruit, flowers, vegetables, fancy work, inventions, specimens of ingenuity, &c., while the other half was appropriated to the dinner tables, which were set for one thousand people. On either side of the avenue leading to, as well as on each side of, the tent, were permanent pens, in which the varied breeds of stock were appropriately arranged and classified. In a field near the railroad depot the plowing-match came off, while in another north of the tent was the spading-match—this latter being a new feature at these exhibitions. Near by, to the east, was a road over a gradually rising hill, upon which the exhibition of working-cattle took place.

As we passed through the avenue to the tent, we could not fail to look with admiration upon the stock displayed. There seemed to be an unusual number of entries of swine, which looked almost good enough to be eaten without any preliminary cooking. Never before to us did they appear so cleanly, nor possess so sweet a flavor. They were mostly of the Suffolk breed. The display of milch cows, also, was very excellent—one, in particular, a Holstein, which cost the present owner, Mr. Capen, \$175, and gives 32 quarts of milk per day. Those exhibited were principally of the Ayrshire breed. The show of fowls, likewise, was very creditable, being a miniature "hen convention," exhibiting great care in both selecting and raising. There was also a very creditable display of horses, some of which would be the immediate making of our stable-keepers did they possess them. In this department of the exhibition, the Committee seemed to have done their very best, in which they were seconded by the contributors.

Passing into the tent, the eye was delighted by

a brilliant array of flowers of every variety of color and species, gratified with the almost interminable rows of luscious fruits, or amazed at the prodigious size of the vegetables. Sight, smell and taste (the latter in imagination,) were gratified with the profuseness of the display. Then, beyond, were all the varied fancy articles, the terming handi-work of the ladies—those loveable helpmates in all the duties of the life-task! Incomparable embroideries, faultless counterpanes, brilliant crayons, agreeably diversified with homespun cloths, variegated yarns, economical fabrics, in-door conveniences, out-door garments, and all the other never-to-be enumerated articles of an annual fair, abounded on every side. Then came the heavier goods—the patent bedsteads, the new style grates, the improved household and out-house implements, &c. &c., *ad infinitum*. Altogether, a very satisfactory and creditable display.

Gazing to our full upon these attractions, we hied to the plowing-match, where, at 9 1-2 o'clock, we found equipped and ready for the contest ten double-teams, seven single-teams, and six horse-teams, every one in fine condition, their owners or drivers in the most buoyant spirits, and admiring thousands lining the well chosen field to witness the display. At the given signal, away went the various teams, amid the crack of the whips and the applause of the crowd. Smoothly and deeply cut the shares into the yielding sod, and proudly the noble beasts performed their holiday service. A more exhilarating or grateful exhibition cannot be conceived than a well-ordered plowing-match.

At 10½ o'clock, the spading-match attracted a numerous throng, from its novelty, if not from its merit. For the prizes there were fourteen *workers*. Lots of sixty feet each had been staked out, and at the given signal, stimulated by excellent music from the band, the competitors bent to their task. They were mostly Irishmen, with here and there a Scotchman or Englishman, and it was amusing to notice the difference in completeness of work by the contestants. The fastest man, who accomplished his lot in ten minutes, with his lines irregular and his excavations uneven, threw the sods more as though making a trench for a canal or a bed for a railroad; while he who took his twenty-five or thirty minutes, broke up and pulverized his spade-full, with lines all regular, and had his lot looking at the conclusion like a newly-spread flower-bed.

At 11¼ o'clock, the drawing match was announced, when some half-dozen yoke of noble-looking oxen were put in succession to heavy wagons, loaded with stone, which they drew with spirit and animation up the steep acclivity. It was a grand sight thus to see the patient and laborious cattle, conscious, seemingly, of their importance, straining every muscle and increasing the lustre of their eyes as they toiled up the hill.

At 12 o'clock, a procession of ladies and gentlemen was formed at the tent, which—preceded by the Weymouth Brass Band, under the leadership of Mr. James Bates, discoursing most eloquent music—passed through the village to Rev. Dr. Lamson's church, where, after the usual preliminary services (in which Hon. MARSHALL P. WILDER, the President, Rev. F. D. HUNTINGTON, of Roxbury, and an excellent choir, participated) an appropriate and eminently practical discourse on Agricultural Education, of three-quarters of an hour's

duration, was delivered by Wm. S. King, Esq., of Rhode Island, editor of the *Journal of Agriculture*, which was received with warm commendation. It will doubtless be published.

The procession then re-formed under the efficient marshalship of THOMAS ADAMS, of Roxbury, and proceeded to the mammoth tent, where a bounteous feast, in Mr. Wright's very best style, comprising every delicacy of the season, was spread."

After the viands had been well discussed, the reports of the various committees on prizes were read, followed by sentiments and remarks from the President, FRANCIS W. BIRD, of Walpole, AMASA WALKER, JOSIAH QUINCY, Sen., Judge HOAR, Dr. J. V. C. SMITH and others, interspersed with music by the band, and the singing of an original ode by the whole company.

Among the invited guests there were Presidents QUINCY and HITCHCOCK, AMASA WALKER, Sec. of State, Judge E. R. HOAR, of Concord, Rev. F. D. HUNTINGTON, Hon. SETH SPRAGUE, of Duxbury, SIMON BROWN, Editor *New England Farmer*, Dr. Stephen Reed, Delegate from the Massachusetts Board of Agriculture, for the Berkshire Society, C. M. Hovey, Esq., JOHN S. WALKER, Esq., Secretary of the New Hampshire State Society, Dr. J. V. C. SMITH, and perhaps, others.

It was a matter of regret that the beautiful animals belonging to the State were not on the ground, as it afforded a fine opportunity for them to be seen by large numbers, and we respectfully suggest that this omission be supplied at a future Exhibition. Every part of the Exhibition was admirably sustained, and it must have a decided effect, not only upon the agricultural, but all other occupations of life in that county.

At an early hour the assembly broke up, all highly pleased with the occurrences of the day—not the least gratifying of which to us were, that we neither heard an unkind word, nor saw an individual intoxicated, or one whose countenance appeared in the least saddened.

For the New England Farmer.

APPLES FROM TWO YEAR OLD GRAFTS.

MR. EDITOR:—Some of us out this way think that our lots are cast in fertile places at least, so far as regards the growing of fruit, and especially of apples, having some small orchards that we were thinking were doing well; some of our trees at twenty years of age yielding from 4 to 7 or 8 barrels of good fruit, but this is under very favorable circumstances.

Now the object of this communication is not to tell what we have done or can do, but to ask if the story told in your last number is to be relied on as strictly correct; was it not 9 bushels instead of 9 barrels of apples raised by Mr. Newton? We would not be understood to say that we deem it false, but it looks marvellous in our eyes, for we have grafted some thousands of trees, great and small, some hundreds of large old trees, some having superior locations and the best of cultivation,

but we have seen nothing that comes up to that Southboro' story by a long chalk,—say more than one-half.

If farmers or fruit growers raise anything very remarkable, it is well to publish it for the purpose of stimulating others to make an effort. Editors of farming journals are men that the farming community look up to with a great degree of confidence, as they should; consequently such communications as gathering 9 barrels of apples from a tree of two years old grafts, should be well considered before it is published, which I presume is the fact. Excuse this fault-finding,—it is done with the right spirit.

One thing more; will some one who is qualified give, through the columns of the *Farmer*, the price of Mexican guano,—its value, compared with stable and other manures; the best methods of using it for guano, kitchen vegetables, fruit trees, grass, flowers, &c. &c.

If any is found to do it, we suggest that after it has been published in the *Farmer*, it be got up in pamphlet form, so that all interested may obtain it.

EAST ABINGTON.

Oct. 4, 1852.

REMARKS.—Our grafts do not produce nine apples the second year. We thought nine barrels too much, and referring to the manuscript, found the words unmistakably written. The communication was accompanied by another, and from a gentleman of integrity, as we trust all our correspondents are. We do not feel authorized to alter statements of facts.

For the New England Farmer.

INJURIOUS EFFECTS OF ONE PLANT UPON ANOTHER.

BY DR. JOSEPH REYNOLDS.

MR. EDITOR:—Noticing in your paper of Oct. 2, that if sun-flowers are planted among thistles, the latter will cease to thrive and will soon die out, I am induced to say a word or two upon a subject that has often arrested my attention. I will first state a few facts, and then make a remark of a general character.

It is an old observation that barberry bushes will spoil a rye field. I have more than once seen the heads of rye in the immediate vicinity of a barberry bush, as erect as so many soldiers, while all the heads at a little distance were bowed down with a heavy burden.

A year ago last spring I had a fine Catawba grape-vine trained on to a wall in a warm place. It was in a bearing condition, and every circumstance promised a good crop. Some tomatoes were planted by the wall, that they might have the advantage of the warmth and protection afforded by it. They grew thriftily. Most of the plants were removed, but three fine ones were left, in the immediate vicinity of the grape-vine. They grew there, and yielded any quantity of tomatoes. But the grape-vine was at a stand still, all summer. I made but a few inches of wood, and only two or three clusters were produced, and those blighted; not a single grape came to perfection.

Some few years ago, I set out a peach tree against another part of the same wall, and trained it to the wall; at the distance of some ten feet was

a fine Isabella grape, in a bearing state. They both grew finely; I never saw a more thrifty peach tree. In about two years, the grape-vine, as grape-vines are apt to do, got hold of the doctrine of annexation, and manifested a disposition to embrace in its long arms all that joined it; it shot its feelers about among the limbs of the peach tree, and in a few weeks its folds, anaconda-like, were entwined around all the branches, but as is often the case in ill assorted matches, this seeming felicity did not long continue. A few half grown imperfect grapes only were found among the peach leaves. The next year the vine was suffered to remain in the same condition, as a matter for observation; the result was the same. While the rest of the vine was heavily loaded with fruit, that portion which was supported by the peach tree yielded few grapes, and none of them perfect.

This fall I have had occasion to notice a field of potatoes, of perhaps an acre; tomatoes came up plentifully in the spring, having been mixed in the manure. The man was directed, when he hoed the potatoes, to cut up the tomato plants, and to leave only now and then one. But they were very thrifty, and John thought it was too cruel to cut them up, and he had not the heart to see them "kilt" with the hoe, and so many of them were suffered to live. The consequence has been, that there was a great abundance of tomatoes, and a very small abundance of potatoes, and small potatoes at that. In those parts of the field where there were few tomatoes left, the potatoes yielded a tolerable crop; but where the tomato plants were numerous, the potatoes were scarcely worth digging. Now it may be said that the tomatoes overshadowed the potatoes or exhausted the soil; but this does not explain the matter satisfactorily; for potatoes will often yield a good crop among corn, which certainly overshadows them and exhausts the soil to as great a degree. I might mention many similar facts, had I time and space.

● My general remark is this. There are many plants that are incompatible with each other. There is an *aura*, an *effluvia*, arising from one plant that operates as a poison upon other plants. One plant will wither and die in the presence of another. Some plants are more highly sensitive than others, and manifest more readily the influence of the neighborhood in which they reside.

Now, Mr. Editor, here is a wide field for observation, and a field which has been but little cultivated. It is important to know, not only what soils are suited to certain crops, but what crops and plants are suited to each other, and what are incompatible with each other. If you are about to settle your boy in business, you would anxiously inquire, by what influences will he be surrounded? Will there be any thing to counteract all the good advice you may give him, and all the watchful care you may extend over him. Just so if you are about to set out a favorite tree, or a valuable plant, you want to know whether there is any plant in the immediate vicinity that will injure its growth, or prevent its fruit from attaining perfection. We sometimes fail to obtain the results that we expected in horticulture, without being able to assign any satisfactory reason. Perhaps the failure is owing to unfriendly neighbors, who exert a blighting influence upon the character and success of the stranger plant.

The influence of flowers upon each other and

the influence of the colors of surrounding objects, is well known to florists, and those who are engaged in producing varieties and hybrids avail themselves of these influences. If these influences are so manifest in the domains of Flora, why should they not be felt in those of Ceres and Pomona? Yours,

J. R.

Concord, Mass., Oct. 8, 1852.

CATTLE SHOW AT FRAMINGHAM.

Being absent in New Hampshire at the time this festival was held, we were, of course, unable to attend its Exhibition and its feast of good things. We understand that it surpassed any of the former shows in that beautiful and enterprising town, and has given a new impetus to the noble cause for which the gathering was called. The ladies, ever foremost in good works, provided the dinner, at which some three or four hundred sat down, and many could not be accommodated with seats, the pressure was so great. The day was pleasant, inviting large numbers from the surrounding towns, and the exercises were enlivened by the excellent music of the *Natick Band*. From a report in the *Traveller*, we find that the first business was the plowing match. Sixteen teams were upon the ground, and the plowing was done in a creditable manner, by plows from different makers. At half-past ten there was a trial of working oxen, which lasted until near twelve. At 1 o'clock the Society marched to the Unitarian church and listened to an eloquent address by Rev. Mr. BODWILL, of Framingham. The singing was of the first order. After the exercises of the church were through, the society marched to the tables to dine. The President of the Society, PATTEN JOHNSON, Esq., made some brief and appropriate remarks, the blessing of God was invoked, and then came

"The feast of reason and the flow of soul,"

including a speech from the Rev. Mr. PHRIS.

The company sat at the table until near 5 o'clock, listening to speeches, music and toasts.—Upon the premiums being announced, the first, on ox team in plowing, was given to A. Haven—plow, Ruggles, Nourse, Mason & Co.'s improved double sod and subsoil. 2d, J. S. Wheeler—plow, same as above, No. 73 1-2; 3d, John Johnson—plow same, No. 73 1-2; on horse teams—1st premium to Col. Hastings—Prouty & Mears' plow; 2d, Buckley Moore, plow, Ruggles, Nourse, Mason & Co.; 3d, H. Eames, plow, Prouty & Mears.

In the stock exhibited there were some fine Suffolk swine; a boar, 18 months old, the property of Abner Haven, another two years old belonging to A. S. Lewis, were fine animals. There was a beautiful boar pig 3 months old, the property of S. O. Daniels, and a large hog exhibited by Jona. Coolidge. The next time they celebrate, "may we be there to see."

For the New England Farmer.

PEACH CULTURE.

MR. BROWN:—I will give you some of the objections to the culture of the peach, with opinions to sustain these objections.

1. That we are too far north.
2. That our winters are too severe.
3. That our seasons are too short to mature the wood.
4. That when we have a crop our markets are glutted.

In the first place, we have a fair crop as far north as 43° 30' this season.

2. We have had a good crop seven years of the past nine, which I think is as good a proportion as is grown in the peach-growing districts of New Jersey. I have lately returned from a tour through the peach orchards of Jersey, and think we shall have more peaches than they, in proportion to our trees. If our winters are too severe, why is it that some trees bear good crops, and others none? I cannot think that the cold of the past winter caused the death of the fruit buds. As I passed through large orchards, I could find no fruit, on the south side of the trees, or any part of the limbs that were exposed to the direct rays of the sun. All that had fruit were with bushy heads, which obstructed the sun's rays from destroying the vitality of their buds.

One tree I noticed on the north side of a building, bent to the ground by the weight of its fruit; the building completely shaded the tree from the sun; that was the only tree that I saw bearing a fair crop. I saw large orchards without a basket of fruit on them, and this is the condition of the orchards in the centre of the State.

In the lower counties bordering on Delaware Bay, and in the State of Delaware, they had a good crop. I cannot but think that the waters of the bay had an influence on the sun's rays by its vapors, which prevented the buds from being too suddenly thawed, while orchards near streams that were frozen are barren, although the cold was not more severe.

Some are of the opinion that the cold, freezing weather we had last autumn injured the fruit buds before the leaves fell. If such is the fact, how is it that trees that were covered with snow are full of fruit, while others in the same lot are barren?—Last winter I was out removing the snow from my trees, after the first drifting snow storm, and found the buds appeared good at that time. After the next storm I cleared them again and found by cutting the buds that nearly all were killed.—In the intervening time we had very cold weather, with clear air, and bright sun. I had a few that were covered with snow which I did not dig out; they produced a full crop this season.

3d. Our seasons are too short to mature the wood of the nutmeg family, which may be owing to their being subject to the mildew, but they are hardly worth growing, on account of their size and quality, and such is the case with many seedlings.

Who wants nutmegs or seedlings when he can have the Grosse Mignonne, Early York, Early Crawford and many others, that always mature their wood and very seldom, if ever, die. I now come to the last objection, that of the market being glutted. Our market is never over-stocked with good peaches, at a remunerative price to the

grower. It is poor fruit that fills our market. It is first supplied from the south with fruit that is gathered in a green state, and sold at a high price here. It is generally so poor and wilted, that it hardly deserves the name of peach. It is the cheapest of the cheap, the dregs of their crops.—Their markets never get over-stocked with choice fruit any more than ours. This season, common peaches sold in New York at \$1 per basket, while Early Crawfords brought \$3 per basket, readily.—If we should increase the supply of choice peaches, we should increase the consumption. It would here, as in New York, be considered an indispensable article on the table of all. Let the product of a few thousand acres of choice peaches be sold in Boston at a fair price, and in a few years we should see sliced peaches served in sugar on the tables of all, and be considered as indispensable as most of our common dishes, especially by the younger portion of the family.

Danvers, Sept. 13.

J. S. NEEDHAM.

THE WEATHER.

Succeeding the fierce drought of July and August, there have been plentiful showers during September, with a few very hot days in the early part of the month. The grass has grown rapidly, and the fields now appear in the lively green of June. No heavy frosts have yet touched the foliage, and the symptoms of decay apparent are the results of perfection and age. The woods are assuming beautiful hues, inviting every lover of autumnal scenery abroad. Fall feed is abundant, and will save for winter use thousands of tons of hay that must otherwise have been fed out in September. The latest fields of corn will have ample time to ripen, and the crop will be considerably increased by this favorable weather. Carrots, beets, turnips, mangel wurzels and ruta bagas are gaining rapidly, and there will be a heavy crop to help out the winter feed for stock. Apples are so abundant that large quantities are fed to cattle and swine. The second crop of hay has been unusually heavy, and many acres have been mowed the second time which in ordinary seasons would not have been cut. Some of the low meadows which were cut early are now producing a pretty fair second crop. Such is the present state of vegetation in this region.

But while we are blest with timely showers and genial suns, other sections of the country are still suffering from extreme drought. In some portions of New Hampshire, Vermont and New York, we understand that there are scarcely signs of vegetation in the fields; the pinching drought of summer has continued, until aided by pinching frosts they have put an end to the struggling existence of the poor plants.

THIRTY-SEVEN TEAMS.—Friend HILDRETH, of the *Middlesex Farmer*, will observe by our report that thirty-seven teams plowed, at the Plowing Match, in Concord, on the 6th, instead of twenty-seven, as he has it. It is believed to have been the largest

turn-out for plowing ever known in the State. Forty-three teams were entered for plowing, but six of them did not contend for the prizes.

For the New England Farmer.

DISEASED SWINE.

MR. EDITOR:—It is perhaps unnecessary for me to say that some copies of your *New England Farmer* find their way "down east," as far as the Provinces, and that they are read with interest and profit by all who enjoy the pleasure of their perusal. I notice your kindness in replying to inquiries for information from your numerous readers, and I venture myself to seek instruction from you, or some of your correspondents, in reference to a disease that has affected my pigs, and also those of some of my neighbors, for several years.

As I can give it no name, I will only attempt to describe its effects. Three years ago, I had a litter of pigs, which were fine looking and thrifty till they were about a month old, at which time some of them became weak in the limbs and back, and unable to follow the sow, (they ran in a small pasture,) and continued to grow worse till they were unable to travel at all, and finally died.—Some of them were taken from the sow before they were taken sick, and these ate well and did not fall away much till they died; some of them were sick two or three weeks. I had not much trouble in this way last year, and to avoid it altogether this year I got a fine sow of another breed, which had a litter of eight pigs. These, when about a month old, were taken with the same disease as those of three years ago, and four of them died. The others appeared very healthy. I let them run with the sow till about eight or nine weeks old, feeding all together, and then shut the pigs up by themselves, and fed, as I had done before, with whey and ground barley, and wheat bran mixed. In about a week they refused to take their usual allowance of food, and thinking they would do better to turn them out again, I did so (at night) and found that some of them were blind. In the morning I found one of them describing a circle not unlike a young dog chasing his tail; a second sitting upon his haunches, throwing his head up, and a third stretched upon his side, jerking his body in perfect agony. One of them died before night, and three within two days.

I have, of course, all along tried to learn the name and for this distemper, and cure have been told by some that it was "hooks or hawks" in the eyes, by others, that it was "rickets," and so on. In the last case I cut out what they call "hooks in the eyes," and gave charcoal and brimstone with milk, poured it down with a bottle, as they refused, *hog-like*, to take either food or medicine.

I have now, Mr. Editor, told my *pig story*, and any directions in the shape of a cure will be thankfully received by myself and many others in this vicinity, who are like myself, without pigs.

While I am writing, I may just say that in this province we have suffered, during the last three months, severely from drought, which has rendered our hay crop, and by the way in this county, one of our most essential crops, only about one-third as much as we usually get.

A PROVINCIAL FARMER.

Annapolis, Nova Scotia, 1852

REMARKS.—We take great pleasure in answering all questions relating to the interests of the farmer, whenever we have the knowledge that is sought, and the time to communicate it. And we think it no vanity in us to say that there is no item of farm business, that we can now think of, which we have not engaged in, from raising the flax, pulling, breaking, swingling, hatchelling and spinning it, and shearing the wool, carding, spinning, quilling and weaving it into cloth. The latter operations were engaged in when a boy from the mere love and fun of the thing; but we have not forgotten the movements, and dare say that we could spin wool or linen, and weave now, passably well. All the other manipulations of the farm are also familiar, as well as rearing and tending cattle, swine, and sheep and poultry. In answering questions, therefore, we usually feel a degree of confidence which we could not have, were these matters only familiar to us from the books; and these things are only mentioned that those reading may have confidence in our replies to their questions.

But we cannot enlighten our friend in regard to his diseased pigs; we have had no experience of the kind, and do not recollect such cases described in the books. But among our numerous and intelligent readers, we have no doubt that some valuable aid may be found; and we doubt not they will communicate it.

For the New England Farmer.

LIME AND SALT AS FERTILIZERS.

MR. EDITOR:—DEAR SIR,—Having been induced by a statement made by Professor MAPES, of New Jersey, in relation to the value of Shell Lime mixed with salt as a manure, to try an experiment to test its value, and the result corroborating, not only his statement, but upon an examination of Dr. Dana's *Muck Manual*, since the result, I find that he strongly recommends the use of lime and salt as a valuable manure mixed with meadow mud or peat. Knowing your anxiety to communicate anything that would be beneficial to the farming interest, I have been induced to make the following statement or result of the experiment, viz:

The farm which I occupy is the one formerly owned by John Augustus, near the common, in Lexington, and the meadow is on the Bedford road; average depth of peat, about 6 feet. This is the second year that it has been cultivated since it was in grass, and one part, about a quarter of an acre, was planted with potatoes, (a seedling called Danvers red) in drills, and manured with common barn-yard manure. The other part was planted in hills with not more than half the quantity of manure from the same heap (seed the same in both instances,) and contained about 1-8th of an acre, but the last had 4 barrels of shell lime and one bushel of salt dissolved and thrown on to slack it, and mixed with a cord of the mud from the ditch alongside, and adjoining the land on which it was used. After carefully measuring two rods of the land where the salt and lime were used, and digging the potatoes, the product was 5 bushels

and 1 peck. The same quantity, say 2 rods, was measured, on which the potatoes were planted with the barn-yard manure only—the result was a fraction less than 3 bushels. Cost of 4 barrels shell lime at Lexington, 42 1-2 cts. per barrel, \$1.70; less value of barrels at 10 cts. each, 40 cts.; cost of salt 25 cts. per bushel; cost of labor composting 50 cts.; whole cost \$2.05. I consider, upon the whole, that the cost of manure in both cases was about the same, and the result would give at the rate of 420 bushels to the acre in one case, and 240 in the other, or in other words at the rate of one hundred and eighty bushels per acre in favor of salt and lime.

I remain your most obedient servant,
 Lexington, Oct. 6, 1852. JAMES GOULD.

MIDDLESEX COUNTY AGRICULTURAL SOCIETY.

The FIFTY-EIGHTH ANNUAL FESTIVAL of the yeomanry of Middlesex was held at Concord, on Wednesday, October 6th. The day was favorable, and everything conspired to render the occasion attractive and successful. The Exhibition, in all its departments, was the largest and finest which the Society, (the oldest County Society in the Commonwealth) has ever made; and in some of them it has never been surpassed in the State, or perhaps in the country.

The various exercises were such as to occupy fully, and even to crowd, the hours which a single day could furnish; but the arrangements were so carefully made, and so exactly executed, that everything was accomplished without confusion or delay. Much trouble frequently arises at cattle shows, as on other public occasions, from want of punctuality—an hour lost in the morning, or even a half hour, cannot be recovered through the entire day. Much credit is due to the chief marshal, Col. W. E. FAULKNER, of Acton, for his thoroughness and efficiency in this particular. So far as it depended upon him, everything took place at the time appointed for it—and was seasonably arranged and provided for. The entries of stock, and of fruit, vegetables, and manufactured articles, were made on the day previous in a much greater proportion than in former years; which gave more time for their arrangement, and relieved the officers of the society from much unnecessary and uncomfortable pressure. By the thoughtfulness and good sense of the contributors, some part of the advantages, of taking two days for the exhibition, were thus secured; and it is to be hoped that the rules of the society may effectually provide a like security hereafter.

THE PLOWING MATCH,

which was the first object of interest in the morning, took place at 9 o'clock. The field was a piece of land belonging to SIMON BROWN, Esq., lying next the river on the Lowell road, containing about eleven acres. It was level, with a tough sward, rather moist, and containing roots and matted

grass enough not to be easy plowing, yet of such even quality, as to give all an equal chance, and leave but little choice of lots. There were *forty-three* entries, and of these *thirty-seven* teams actually engaged in the contest—a larger number by one-half at least, than had ever plowed at any previous match in the county. So far as our information extends, there were never so many competitors at any plowing match in the State. They came from all sections of the county, and from their performances it might safely be said, that better plowmen were nowhere to be found. The chief marshal and his assistants were early on the ground, so that the places were drawn, the teams stationed, and everything was ready for the signal at the appointed minute. "Whoever is not ready to start at 9 o'clock, precisely, must wait another year," was the order. From the moment the plowing commenced, the scene was extremely beautiful and exciting. Two little knolls, which were covered with spectators, afforded a view of the whole field at once, and from the road, and from the hundreds of carriages that surrounded the ground, the opportunity of seeing was nearly as good. From the bridge, the whole moving panorama was seen reflected in the glassy surface of the river, as in a mirror. The quality of the work was worthy of the number of competitors, and the keenness of the competition. Not a man plowed, who might not have entertained a reasonable expectation of taking the first premium—and the task of the committees in deciding between such rivals, might well have been agreeable, but could not have been an easy one. "I have taken as many premiums for plowing in my time, as anybody," said an old member of the society, who looked on, a deeply interested and delighted spectator of the scene, "and the poorest plowing there is here would have taken the first premium at any match I was ever at before." One team finished its eighth of an acre in 17 minutes—and the whole was done thoroughly, rapidly and handsomely. The spirited contest was witnessed by a large concourse of people.

TRIAL OF WORKING OXEN.

The trial of strength and discipline of working oxen, and horses, followed next at 10 o'clock, on the common in front of the Middlesex Hotel. Of oxen there were 20 teams, and of horses 4 teams, entered. There were many fine teams on the ground, and the cattle generally exhibited evidences of good blood, full strength, and excellent training, with skilful management on the part of the drivers.

The weight of the load to be drawn was 7200 lbs.

CATTLE, SWINE, POULTRY.

The society put up 52 substantial pens which were mostly filled the night previous to the show. This stock included fine specimens of native, and most of the foreign breeds. There was also a fine

display of swine and poultry; but we have already occupied so much room, that we can give nothing in detail in relation to them now. Hereafter, we will give some of the statements made by the competitors of the breeds and qualities of their stocks.

There was a fine display of needlework, in great variety, by the ladies, which added much to the beautiful appearance of the hall.

For the New England Farmer.

SKETCH OF THE LATE HON. JOHN W. LINCOLN.

BY FREDERICK HOLBROOK.

HON. JOHN W. LINCOLN died on Saturday evening, 2d of October instant, at his residence in Worcester, Mass., aged 65 years. It is but seldom that death finds a more useful man. It is a homage due to such departed worth, to endeavor to transmit through the shades of the sepulchre some reflection, however faint, of its living lustre.

Colonel Lincoln was the third son of the late Hon. Levi Lincoln,—a man of distinguished talent and reputation, at one time Attorney General of the United States, and at another Governor of Massachusetts. The Colonel was born at Worcester, and there resided through life. He received a mercantile education, under his uncle, the late Daniel Waldo, of Worcester, and established himself in the business to which he was bred, devoting several years to its pursuit. He early commanded the Worcester Light Infantry, at a period when voluntary military organization and discipline was essential to the safety of the country; and received orders from Gov. Strong to march his Company to Boston, to aid in protecting the towns along the sea-board from the impending dangers of the last war with Great Britain. His company were encamped for several months at South Boston, until those dangers had passed; and no man led out or returned a company under higher discipline. He was closely identified with the leading interests of his native town, county and State, either as a legislative or executive officer; indeed, there was hardly any period, after he entered upon the career of manhood, when he was not, in some capacity, a public man. In 1824, '25 and '26, he was the member from Worcester in the House of Representatives of the State Legislature; for five years following he represented Worcester County in the Senate; and afterwards was returned to the House of Representatives. His practical ability as a man of affairs, his sound judgment and discretion, and never-failing fidelity to the public welfare, all conspired to fit him for legislative duties, and gave him influence in the State Councils. He was first and foremost among those who early led off in the system of Internal Improvements in Massachusetts; took the principal supervision of the construction of the Blackstone Canal between Worcester and the city of Providence—a work of great public utility in the early days of transportation by canals; and at a later period engaged in the inception and construction of several Railroads of great public importance. He was for many years the chief executive officer of his native town; was a County Commissioner; almost always an officer in five or six

incorporated companies; and in all these several capacities he was unrivalled in prompt observance of appointments for the transaction of business, in practical judgment, and an energy and earnestness of purpose which usually accomplished whatever it undertook.

In 1844, he was appointed High Sheriff of Worcester County. He continued in that office for seven years, and in the discharge of its duties won the reputation throughout the State of a model executive officer. In the language of another—"As a Sheriff, while he executed the law with fidelity, he never lowered its moral dignity by forgetting the claims of humanity. While he was obliged to deal with wickedness and crime, he did it gently, seeking to touch the tender chords of the heart and to reclaim the felon, rather than by severity to harden him in his downward course. The deep interest which he took in securing moral and religious instruction for criminals is known to many who gave their attention to the subject. His influence and example was most strongly felt inside the walls of the prison, and no better proof of his earnest sincerity can be given, than by stating the fact that when he failed to secure the services of clergymen on the Sabbath, he supplied the deficiency by giving moral instructions himself, and employing such persuasives as were likely to influence and reclaim the vicious." If space allowed, many interesting facts might be stated, illustrative of his talents as an executive officer. He was endowed with great decision of character, and whenever in the discharge of his executive duties it became necessary for him to summons this bold quality into action, it was curious to see how quickly the space would clear around him, and how any disposition to interrogate, dictate, or banter, would preserve a respectful and politic distance, judging it not unwise to keep the peace with one of so much energy.

But in no department of labor had Col. Lincoln been more useful than in his devotion to the interests of agriculture. He had owned a fine farm for over thirty years; and in later life his desire for the promotion of Agricultural Improvement amounted to no less than a ruling passion. He gave much time to the subject in a public capacity, and in his private practice upon his farm he illustrated the benefits of science as connected with the cultivation of the earth. He patiently sifted such theories as commended themselves to his judgment as likely to prove valuable, by accurately conducted experiments, in which guessing found no favor, but results were ascertained by weight and measure, and reliable conclusions were arrived at. He never pretended to understand a matter till he had been to the bottom of it; and then he was firm and decided in his opinions regarding it; and those opinions had authority and influence with agriculturists generally. Probably it is not too much to say, that he possessed the most extensive and valuable agricultural library of any man in New England. Here all the agricultural books and publications of any respectability that have ever been published in the English language may be found; and no doubt the frequent consultation of them was of great advantage to the Colonel in the formation of his opinions and the conduct of his experiments.

He distinguished himself by the science and practical skill with which he employed irrigation

for the improvement of his farm. He gave a large share of the time which could be spared from other engagements, to this department of farming, deriving from it much pecuniary advantage, as well as healthful and amusing recreation. In an essay upon irrigation, he says: "no school-boy is more amused by paddling in the water, than I am pleased with turning it about from place to place on my farm, knowing that I could in no other manner be more profitably employed; gratified with witnessing from time to time the superior growth of the grass, and anticipating the pleasure of seeing a heavy swath when it shall be cut." He had thirty acres of sandy intervals, situated on the margin of the Blackstone river, which for about thirty years he irrigated from that stream, exhibiting one of the most systematic, complete and valuable specimens of irrigation that could be found in this country. Many advantages, direct or indirect, were derived from the artificial watering of this meadow: it caused a greatly increased product of hay, while the land required and received no manure at all from the yards; the extra quantity of hay supported an increased stock of cattle, double the manure was in consequence made, all the manure was spread upon the upland fields—thus giving a progressive improvement to the whole farm; and it clothed the interval with a rich rank aftermath, which, in dry seasons particularly, when other lands afforded but little fall-feed, was a convenience of considerable importance. In addition to the irrigation from the river, he employed the temporary streams formed upon the farm in the spring by the rains and melting snow, conducting them to the hill-sides and spreading their waters along down the slopes; also, in like manner, the little brooks formed by springs in the highlands.

In the improvement of the breeds of agricultural animals, he was among the foremost of his contemporaries—the excellent quality of his swine, and of his milch cows for dairy purposes, being admitted by all who had ever seen them. Various experiments were in progress upon the farm at the time of his decease, which, had he lived to carry them out, would probably have elicited important facts contributing to the settlement of some mooted questions in agriculture. Among the improvements he intended to enter upon this present season, was the employment of a competent chemist to make a full analysis of the different soils composing his farm, so that afterwards modes of culture might be adopted which were fitted to the capabilities or wants of each field.

For many years, he took an active part in the operations of the Worcester County Agricultural Society; and his reports from time to time, as chairman of different committees, invariably displayed that practical judgment, research, and reflection, which characterized all his undertakings. Whenever he put pen to paper, the fundamental points bearing upon his subject were either made clear to the reader, or, if further experiments were needed before they could be stated with certainty, useful suggestions were given as to the kind of experiments most likely to diffuse the desired light, and the best mode of conducting them. Two years ago, he succeeded his worthy brother, Ex-Gov. Levi Lincoln, in the office of President of the Society. He immediately showed his talent at originating important measures, by putting on

foot some experiments in the name of the Society calculated to throw light upon undetermined matters in Agriculture; and he had mostly matured other plans of operation for the Society, which in their practical workings and results, would unquestionably have proved useful, and commanded very general attention among agriculturists throughout the country.

In his private character, Col. Lincoln was a most estimable man. Notwithstanding his great energy, courage, and decision when circumstances demanded their exercise, he could on other occasions yield to the melting movements of the heart; and his sterner characteristics were blended with that humanity, generosity, and mildness of temper, and polite simplicity of manners, which made him the agreeable companion, and the fast friend, alike reliable, in storm or sunshine. As an interesting illustration of his milder characteristics, it may be stated that when a few years since certain benevolent citizens of Worcester, touched by sympathy for the houseless helpless ones around them, formed a Children's Friend Society, they found in him a generous patron; his liberality provided an Orphan's Home, and his gratuitous labors were ever afterwards given for the welfare of its inmates, that they might be taught the rudiments of letters, their young minds instilled with moral and religious truth, suitable employments found for them when old enough to go out into the world,

"So that none,
However destitute, need be left to droop
By timely culture unstained, or run
Into a wild disorder."

His whole appearance and address was such as produced an instantaneous conviction of his sincerity; he preserved a strict and inviolable regard to truth in all his words and actions; whatever he affirmed was, as far as his knowledge went, as certain as an identical proposition. Diligent in the improvement of time; and choosing duty before inclination; he, in addition to his many more public services, filled up a long life with those numerous little acts of goodness which have left blessed memories behind them, and which are the peculiar adornments of private life. Surely, in the death of Col. JOHN W. LINCOLN, a great deal of worth has departed;

"The elements
So mixed in him, that Nature might stand up,
And say to all the world—'This was a man!'"

COURTEOUS.—Our thanks are due the Officers of the *New Hampshire State Agricultural Society*, and of the *Bristol County Society* of this State, for polite invitations to attend their Exhibitions, accompanied by free passage and dinner tickets. We certainly should have been with them had we possessed the power of ubiquity.

We have also received invitations to visit several other societies, both in and out of the State, which we should have been most happy to attend had it been in our power. We shall notice their exhibitions as we have opportunity.

☞ If State, County and Town Societies will send us lists of their officers, we shall be happy to publish them.

BARNSTABLE CO. CATTLE SHOW.

We had the pleasure of passing a day or two with the Cape Codders, last week, and of attending their Cattle Show at Sandwich. On Tuesday evening the hotels were more than full, and many were accommodated by the hospitality of private citizens. There were indications of rain early on the morning of Wednesday, which undoubtedly kept many at home in the early part of the day; but when the clouds had dropt a few pearly tears, they relented of the evil they had done, and sailed away majestically over the hills, letting in the bright influences of King Sol and whole cavalcades of men and maidens, children, and horses and vehicles of every sort.

Looking in at the Hall more particularly appropriated to the handiwork of the ladies, we saw some things strongly contrasting with their delicate performances. Grimly enclosing the "beauty and fashion" of the town stood a black iron fence, strong and substantial, three feet high, with ornamented posts four feet high, and manufactured by the Manomet Iron Company. This fence is sold at \$1.25 a foot, the posts at \$4 each—cheaper than a good and handsome fence can be made of wood. Then there was a *sugar refiner*, by the same company, the patent of SMITH GARDNER, of N. Y., about four feet high, and two and a half in diameter, filled with strainers, and so arranged as to bring a pressure of ten pounds to the square inch, pressing out the molasses and leaving the sugar dry; thus saving all the filthy processes in sugar refining by blood. A case of dental tools, by N. C. FOWLER, Yarmouth-port, was very fine. The huge bowls, beautiful decanters, tumblers, finger-bowls, glasses, &c., from the Glass Works at Sandwich, cannot probably be excelled anywhere. The ladies were busy among the products of their skill, (themselves the fairest flowers,) the gentlemen were attentive, and altogether the Hall presented a pretty and lively appearance.

The entries at the pens of horses, cattle, sheep, swine and poultry were not large or unusually excellent, but the pens themselves were patterns for any county in the State. Neither was the show of fruit and vegetables large, but excellent specimens of many varieties were presented. In quinces and cranberries Cape Cod will beat the world.

Eight teams plowed, being all that were entered for competition, we supposed, as but eight lands were struck out. The ground was unfavorable, a portion of it being on the hill-side. Men and teams showed skill, but the plows were of an ancient date.

The dinner was at PORE'S HOTEL, and was better than any of which we have partaken on similar occasions. But the chief charm was lacking—there was no intellectual feast—no toasts or speeches. The dinner over, a procession was formed and marched to the Town Hall, where a forty-minutes

address was delivered by SIMON BROWN, of Concord.

Reports of committees were then read and premiums awarded, and the business meeting of the Society having been held in the morning, at which the officers were elected—the show was over.

Upon the whole, the Cape Codders did not do on this occasion as well as they might have done; but nearly as well as *ought to be expected* where the society is an itinerating one. We understand that the meetings are hereafter to be holden at Barnstable, that the change is organic, the constitution having been so amended as to require the meetings to be holden at that place annually. We had a pleasant time, and would here express our obligations to C. B. H. FESSENDEN, Esq., President of the Society, and to other gentlemen, for polite attentions.

For the New England Farmer.

SEED POTATOES.

MR. EDITOR:—I have a few words to say about seed potatoes. Though it may *seem* a little out of season—yet perhaps it may not be so much so as it seems. I think that farmers should look out for their seed *now*, and will show my *reasons* as soon as possible.

There has been much discussion whether it is important or not to save *large seed* for planting. I think that the size of the potato *as a whole* is not to be looked at, as much as the condition of the eye—which is of course the germ of the plant; if you wish thrifty potatoes you should attend to this; cut potatoes with sound germs are better for seed than whole ones with what I call *weak eyes*. Let us look however at the *office* performed by the *body* or bulb of the potato. In the first place, it is the organ by which in the growth of the plant the germ is established, and the *first stage* in its existence completed; in the next place, it is a *magazine of nourishment* to supply material to support the growth of that germ when it starts on its second stage.

Whenever a potato is placed in a warm, damp place, the juices contained within it undergo a change. Electricity is developed, which starts the germ into action, the sprouts of the potato shoot out, and the nourishment contained in these fermenting juices in its body are taken up by the growing sprout and form its composition. As long as the potato is kept in a favorable situation for this change in its juices to continue, the sprout grows until it at length takes up all the capital it had to start with, all its *fund* supplied by nature; now, unless it is placed in the ground it can progress no further, for it has emptied the bank. It is evident that if we plant potatoes early, before the ground is in a condition to supply a constant source of nourishment, it is best to plant large potatoes, and not to *skin off the seed end* too closely. And then again, it is a good plan to plant *sound* potatoes, not *wilted* ones that have sprouted and had the sprouts broken off several times; why? Because every time that a sprout puts forth, it exhausts the electric power in the bulb and also takes up of its nourishment; large potatoes therefore that have sprouted several times, are no better to plant than small ones whose bulbs or bodies have

not been thus exhausted; you know that when we dig potatoes, we find the old seed rotted and nothing left of it but a shell; all its *power* has gone, its *nutritive element* gone, *completely exhausted*; you would never think of planting it again. Now the potato that has been *sprouted* several times in the spring, is in the same condition in *quality*; but not so far gone in *degree*; it is not wholly, but *partially* emptied. Seed potatoes should be kept, then, where it is cool and dry, so that they shall not sprout until after they are planted; they should be kept in the dark also, that no evaporation may go on in the juices.

I think that I have settled the question of large or small seed; however, I should like to hear the views of others on the subject. If my views are correct, this article is proved not out of season, as now is the time to look to the preservation of seed potatoes so as to have them *right* in planting time.

OSCAR MELLISH.

For the New England Farmer.

BERKSHIRE COUNTY AGRICULTURAL SOCIETY.

This time-honored association held its annual festival on Wednesday and Thursday, the 6th and seventh days of October. The first day was appropriated to the entry and examination of the animals, and other objects of the show; the second, to the plowing, meetings of the farmers, awards of premiums, &c. &c.

The most striking object of attention to the eye of a stranger was the mass of full-grown and energetic yeomanry in attendance. The men are proportioned to the hills they inhabit. The mountain air, or the mountain labor, is admirably calculated to rear a race of men altogether more efficient than are to be found in the pent-up workshops at the east. It may be that a man will earn as many shillings *daily*, by sewing shoes, in the contracted work-shops where they are made, as by holding the plow on the hills of Berkshire; but it never can be that such an employment is so well calculated to develop the energies of the man. That State which would have men worthy the name of men, should have regard to their employment, and cherish those labors which will enable them to do the State some service, when such services are needed,—either in the Senate or in the field.

Glancing the eye hastily at the objects presented at this Show, I noticed some superior *working oxen*, particularly one pair of five years old, weighing more than 4000 lbs., that had recently been sold for \$170. There may be superior cattle, but it has not been my luck to see them. Among the *bulls*, there were several two and three years old, first-rate animals. Nearly all these were the offspring of the foreign with our native stock. The Devon and Herefordshire were most prominent. Of the *horses* there was a full display,—some of them of fine form and movement; but not being expert in knowledge of horses, I will not presume to particularize, lest my ignorance should be apparent.

Of *milk cows* there was a goodly number—not less than a dozen. One old cow, with a crumpled horn, hollow back and raven ribs, struck me as worthy of particular notice. On inquiry of the Irish lad who attended her, and who said he had milked her himself all summer, I learned that from

her milk alone was made in the month of June 59 pounds of butter, and in the month of July 50 pounds; and from her owner I afterwards learned that 188 pounds of butter had been made from her milk in 120 days, and that she would probably yield 300 pounds during the season. Her feed was such as she could obtain from the common pasture, and *four quarts of shorts* daily. Nine other cows were presented, which were said to have yielded 14 pounds of butter a week, per cow, in the course of the summer;—a yield that will do quite well for Yankee cows, and which shows, with proper attention to the selection of the best from our own hills, there is no occasion for further importations. I admire the Jersey cows and heifers that I have seen of recent importations, but still I have great doubts whether any better animals for dairy purposes can be found than the best of what are called our “native breed.” Forty or more pounds of butter were exhibited from different dairies, and several parcels of cheese of superior quality. The dairy products were decidedly good.

Of *sheep* there was a *quantum sufficit*, more than thirty different parcels; some looking as dirty as *mulattoes*, and others as white as *lilies*; some as big as a moose, others but little bigger than a woodchuck. It requires more science than I possess, to discriminate by a hasty glance in such a variety.

Of *swine* the Show was numerous, of every variety, from the delicate Suffolk pig to the overgrown pattern of the race, with his forbidding protuberances.

Of the *biddie race* there was a good display, but I did not learn that any *fowl convention* had recently been holden there; perhaps there is not among them any *goose* or *turkey* anxious to be sent to Washington. Without doubt there are many quite equal to those who do go.

One remark I will venture to make upon a view of the display of animals, &c., that they suffered much for want of convenient arrangement in their position. When fifty or sixty wagons are driven together, loaded with animals, sheep, hogs, boars and sows *hiller-skeller*, without any order, in a manner that makes it not easy or safe to move among them, it is not possible to examine such animals with good discrimination.

In the hall for manufactures, fruits, &c., there was a good display; among them many articles of superior quality. My attention was particularly arrested by a display of fifty varieties of apples, presented by a gentleman from the State of New York; some of them of form and color surpassingly fine, others of a richness and tenderness rarely equalled. I had supposed our eastern apples were not to be beaten, but I acknowledge that some of these from New York excelled anything I have seen at the east. The grapes presented were fair and of good quality. The peaches had lost their flavor—the time has gone by for the best of peaches. Pears were good, but not equal to those seen nearer home.

On the evening of Wednesday, all hands assembled for the benefit of the church, and a fairer assemblage I never witnessed. The ladies of Berkshire would be entitled to a first premium, at any Show.

On the morning of Thursday the plowing match came off, between 9 and 11 o'clock, when twenty

teams entered into the contest,—twelve horse teams and eight single ox teams,—all viewed by the same committee, of which Judge Bishop, (Gov. some called him,) was chairman. The contest was animated and interesting. The plowmen were required to cut their furrow slice six inches deep, and not more than twelve inches wide, and to complete the plowing of one-quarter of an acre in fifty minutes, all of which was done by each of the teams. The furrows made by the horse teams were to be laid *flat*; those by the ox teams to be *lapped*; the regulations showed a discriminating judgment in those who made them. I examined all the lands with as much care as I could command, and could readily assort them into *first* and *second* classes; further than this I did not presume to go. Nor was I able to say which class of teams, the horses or the oxen, should have the preference. In some matches that I have witnessed of late, I thought the work was best done by horse teams; but I am not prepared to say this at Berkshire.—The swards of the land had not sufficient tenacity to try the teams or show the work to best advantage. When there are so many acres around, needing to be plowed, it is strange indeed that a field exactly fitted to the purpose cannot be commanded. Why do not those having charge of these matters, take care, in season, to procure such a field as they want? Especially when the Show is continued, year after year, in the same town.

After the labors of the field were over, the society met at the church, to hear an address, and to award their premiums. Here occurred a scene of interest such as I have never before seen. In front of the pulpit was displayed the full contents of a jeweller's shop, consisting of several hundred pieces of silver, varying in value from \$1 to \$10 each, to meet the awards. These were distributed to the successful competitors, by the marshals, under the direction of the President and Secretary. This occupied about two hours, and had it not have taken so much time, (when all were impatient for their dinner,) would have been a most interesting performance.

I forgot to mention that the society were disappointed in the *scientific report* that they had expected from Dr. Lee, of Washington, by his failure to appear. Here let me say, that those societies which are content with the *first cut only, from abroad*, make a great mistake. The *Address* should be a part of the *County Show*, as much as any other part of the exhibition, and those societies act wisely, who limit their appointments to citizens of their own county. In so doing they encourage their own citizens to qualify themselves to make good addresses. I have heard as good agricultural addresses from veteran hard-handed farmers, as I ever heard from any college-learned gentleman. I have more confidence in their instruction. I would not undervalue *gentlemen farmers*, but I confidently say, no man can thoroughly understand and teach the business of cultivating the soil, who does not engage practically in it with his own hands.

Oct. 9, 1852.

☞ It is better to sow a young heart with generous thoughts and deeds than a field with corn, since the heart's harvest is perpetual.

☞ A bushel of wheat, weighing sixty-two pounds, contains 550,000 kernels.

FITCHBURG CATTLE SHOW.

It is our intention to speak of all the shows held in the State as we can find space. We have read the report on vegetables and flowers, made at the late show at Fitchburg, by JOHN J. PIPER, Esq., with pleasure. Mr. Piper is evidently a lover and observer of Nature, and has seen the fields before the morning dew had gone. The report is spiced with pleasant touches of quiet humor, which adds a merit to those of the subjects which he discusses. He says "a volume might be written in behalf of that honest and sturdy vegetable, the cabbage.—The glowing pumpkin, and the radiant squash—who does not love them, associated as they are in their yellow glory and goodly size with the glad harvest-time, the happy, home Thanksgiving re-unions, and merry faces around the old festive board! To love squashes and pumpkin pies is as decided a characteristic of the true son of New England, as singing "Hail Columbia," or whistling "Yankee Doodle," and long may it be, ere the lines of their golden beauty, and the pleasant memories that cluster around them, fade from our hearts.—There,—"*that's the talk*" for a committee man; the "*facts*" are indispensable, and the "*fun*" with them is a capital relisher.

ROSE-BREADED GROSSBEAK.

[Extract from a private letter.]

SIR:—In the August number of the *New England Farmer*, page 351, I observe that a correspondent states that the Rose-Breasted Grossbeak "inhabits the Rocky Mountains, Canada, Newfoundland, &c." It may be interesting to him to know that it is one of our commonest summer birds here; and I believe generally throughout Michigan. I live 15 miles south of Detroit, the latitude of which, according to the *Army Meteorological Register*, is 42° 19' 18", while West Point is 41° 23' 30", so that it cannot by any means be called a *Northern* bird, and for several years we have ceased calling Michigan a *Western* State.—The Grossbeak frequents generally the deepest woods, but in a walk of an hour through such, or on the edge, a dozen specimens may be seen; and later in summer the young are very numerous. It is comparatively a tame bird, and allows of near approach. However, I must acknowledge that though an ardent naturalist, I have never met with the nest, which I *suppose* to be built high up on the top of tall trees, out of reach and sight.—The bird itself generally perches near the top of a tree. It has the character here of killing and eating small or young birds, but I have never detected it in this. Very obediently yours,

CHARLES FOX.

Grosse Ile, Wayne Co., Michigan, }
Oct. 4, 1852.

REMARKS.—We are happy in finding so much attention given to the interesting subject of birds. A brief record of such observations as we have recently received from several correspondents, will gradually lead to a much better knowledge of their habits, and consequently show us whether they are beneficial or detrimental to the farmer.

DEVON BULL.

Many of the handsomest and best oxen now in use among the farmers in New England, are of the Devon blood. They are straight on the back, the head small and eyes bright, very quick in their movements, and when slaughtered excellent for the shambles. The subject of the above engraving was exhibited at the New York State Fair last year, was the property of the Messrs. WAINWRIGHT, and drew a premium as the best Devon bull, over three years old.

The north part of Devonshire, in England, has long been celebrated for this breed of cattle, beautiful in form and color in the highest degree; and in activity at work, and facility of fattening, unrivaled. The color of the Devon cattle is of a beautifully bright, full, blood-red, often with a clear white line on the brisket, running back between the hind legs, sometimes reaching to the flank, with a white brush. The head of the ox is singularly small, the forehead broad, the eye prominent and bright, and the forehead hollow between them; the muzzle very light and clean; no dewlap or loose flesh about the jaws and neck; remarkably straight, smooth, well-turned limbs; a light, tapering tail; a thin, free skin, and very smooth body. His fore-legs stand farther back under his body than those of other breeds. The Devon has rather long legs, is more active and sprightly than any other, and may be made to trot three or four miles an hour, which no other ox can stand. The cow is quite small; the bull is a great

deal less than the ox, and the cow smaller than the bull. It is not uncommon for a cow to bring a calf which becomes twice her own size and weight.

For the New England Farmer.

THE RED RUSSET APPLE.

MR. EDITOR:—I wish to obtain some information respecting the Red Russet apple, which originated at Hampton Falls, N. H. In the second volume of the *New England Farmer*, page 150, I find a description. The editor there says, "In the year 1848 we obtained a barrel of this fruit to give it a fair test, and placed it by the side of a barrel of fine Roxbury Russets. Both kept equally well, extending into summer. But the Red Russet was the better both for the table and cooking."

I find it to be a great grower, and it is said to be a great bearer, and adapted to the same kind of soil as the Baldwin. This is saying a good deal in its favor, and if there is no drawback, it will prove a valuable fruit. But as it originated from a Baldwin scion, some think it may not prove to be a distinct kind.

I wish to inquire if any of your correspondents have obtained fruit from trees propagated from the original, and if so, was it a true type of the Red Russet or not, and what is the size compared with the Roxbury Russet. Any other information would be gratefully received by a

Deerfield, N. H.

SUBSCRIBER.

RAPID WORK.—At the recent Plowing Match, at Concord, five acres of sward land were handsomely plowed in thirty minutes; that by the double teams, nine inches, and by the single teams, seven inches deep!

ESSEX COUNTY CATTLE SHOW.

Not finding it possible to accept the polite invitation of the President of the Essex County Society to attend their annual Show, we are obliged to give an account of it from the reports by others, and take the following from the *Journal*. We hear that the people of Essex kept up their ancient reputation in all points, and that the Exhibition was a very fine and satisfactory one. The Exhibition was at Lawrence.

Plowing Match.—This trial came off on a piece of land about half a mile from the Town Hall, near the Methuen road, in the presence of an immense concourse of people. Fifteen double ox-teams, 12 single ox and 13 horse teams were entered for the match; and at about quarter past 9 o'clock the plowing commenced in that quiet, steady manner, so peculiar to the New England farmer. There was no shouting or noise whatever. The allotted tasks were accomplished in excellent style.

After this match was over, the multitude adjourned—some to their homes, and some to the village, but most of them to the spot where the trial of the working oxen was to come off, in Cross Street. The task assigned was the drawing and backing of a load weighing 4000 pounds, up a hill. About twenty teams were entered for the trial, and most of them performed the work in a manner creditable to themselves and to their owners.

At a quarter before 12 a procession was formed at the Town Hall, composed of the officers of the Agricultural Society, invited guests, and citizens generally, and escorted by the Lawrence Brass Band, marched to the Lawrence Street Church to hear the address. The services were opened by the reading of a passage from Scripture, and a prayer by Rev. Mr. Storrs, of Lawrence, after which the orator of the day, Henry K. Oliver, of Lawrence, commenced speaking.

His remarks dwelt mostly upon the importance of a scientific agricultural education for farmers. The farmer's interest, he said, was the great and powerful interest of the community. He then drew a forcible contrast between the moral and physical conditions of our farmers and the European tillers of the soil, and deduced the conclusion that the higher the degree of education which prevailed, the higher the rank which the people of the country would hold among the nations of the world. Will you dwell, said he, within the great laboratory of God, and gaze upon His works, and still refuse the instructions which are offered you concerning their formation and growth and perfection? He recommended the introduction of agricultural schools throughout the country, and urged farmers not to retard the onward progress of agricultural education by clinging too closely to their old prejudices, and refusing a fair examination of new improvements and inventions. Mr. Oliver then paid an eloquent tribute to the memory of the late A. J. Downing, and concluded his instructive and interesting discourse with an appeal to the farmers of Essex to maintain the dignity of themselves, and their country.

After the address, those present formed in procession, and escorted by a noble team of oxen and the band, proceeded to the dinner hall, in which plates had been laid for four hundred and fifty persons. They there found an ample collation await-

ing them. Grace was said by Rev. Mr. Storrs, and the company fell to. After about an hour, being "all full inside," as the omnibus man said, they desisted, and listened for a while to the voice of the President of the Society, Hon. J. W. Proctor, who expressed his gratification at seeing so many friends of agriculture assembled together.

Mr. Proctor was followed by Rev. Dr. Hitchcock, President of Amherst College, Henry K. Oliver, Hon. Daniel A. White, Dr. Reed, of Pittsfield, Mayor Upham, of Salem, and Hon. James H. Duncan. The speeches were brief, excellent, and to the point. An agricultural song, written for the occasion by Edmund Josselyn, of Salem, an able and humorous production, was sung by Mr. Brown, of Salem, and received with great applause. After the speeches were over, the assembly returned to the Lawrence Street church and listened to the reading of the premiums which had been awarded by the Committees. Thus concluded the exhibition.

There are many very fine specimens of horses and colts; and a large number of beautiful cattle are on the ground. A particularly excellent pair of 3 year old steers in the yoke from Andover, were noticed, as also a fine Durham bullock and two heifers in the same enclosure.

Of swine and pigs there is a large display. The Suffolk breed of porkers seems to bear away the palm, of which there are a great number of all ages, and both sexes, but only of *one condition*, and that is an exceedingly fleshy one. They range in ages from the tender squealing little porkling not yet emancipated from the "litter," to the huge old patriarch of three (not three score) years.

Of poultry, also, there are very many varieties, including geese, ducks, chickens, turkeys and pigeons, among which are several beautiful pairs of the carrier variety.

The horticultural and mechanical specimens are on exhibition in the Town Hall, which is crowded with a splendid array of fruit and flowers, as also specimens of handiwork in the department of the fine arts, of textile fabrics, and of domestic economy, in the highest degree creditable to the skill of both Yankee male and female hands.

There is a silver mounted plow immediately at the entrance of the hall, from the shop of Messrs. Currier, Doe & Co., Concord, N. H., which surpasses anything in the agricultural line ever before seen in this region. Cabinet work, chairs, carpets, &c., &c., in great variety and richness. One set of chairs of an antique pattern 125 years old, and one chair 160 years old, are on exhibition. Velvet wall paper, from the Chester Paper Company, Lawrence, is most exquisite in style and pattern. It is of a very expensive kind, ranging from \$2.00 to \$5.00 a roll. A model of the first house in Methuen, built in the year 1720 by Richard Messer, is to be seen in the hall. Some very good specimens of drawing adorn the walls, and a great variety of embroidery, piece work and worsted work, from the hands of lady exhibitors, is to be seen.

In regard to the pomological, vegetable and Floral department, it is only necessary to say that it will bear a fair comparison in the variety and excellence, though not near so extensive, as that on exhibition at the Public Garden in this city last week. Several boxes of very luscious honey are also in the hall.

Twelve double ox, and eleven single ox teams, and eleven two-horse teams, are already entered for competition for the Stetson premiums on plowing. The 1st premium is \$25, and the second \$15. This match comes off to-morrow, as also a spading match, and other matters of general interest.

For the New England Farmer.

FIRST AND LAST SNOWS.

MR. EDITOR:—As we had a *few flakes of snow* on the 15th inst., with the remark of many that it was *earlier* in the season than usual, it has induced me to *search the record* kept for twenty years past. The following is the result of my examination:

<i>Last snow in the season.</i>	<i>First snow in the season.</i>
1833.....April 24.....	October 20.
1834.....April 27, 3 in. deep.....	October 14.
1835.....April 25, 2 in.....	November 23, 7 inches.
1836.....April 13, 3 in.....	November 3, 5 inches.
1837.....April 24.....	October 13.
1838.....April 25.....	October 28, 4 in.
1839.....April 17, 2 in.....	November 10.
1840.....April 1, 2 in.....	November 18, 5 inches.
1841.....May 2 and 3.....	October 4.
1842.....May 20.....	November 16.
1843.....April 19.....	November 7, 1 inch.
1844.....March 30... {	Oct. 31, a very few flakes,
.....May 8.....	no more till Nov. 28, 4 in.
1845.....April 15.....	November 9.
1846.....April 23.....	October 28, 4 in.
1847.....April 23.....	November 28.
1848.....April 19, 2 in.....	November 9, 4 in.
1849.....April 19.....	December 3, 1 inch.
1850.....April 16.....	November 26.
1851.....April 20, 2 in.....	Oct. 27, 34 inches.
1852.....April 24.....	October 15.

The number of inches of snow attached to the date is no correct indication of the amount of snow that fell, but only what remained after the several storms, as a great part of the late and early snow melts as it falls.

The earliest snow in any one season fell at the close of the remarkable violent and destructive storm of Oct. 3 and 4, 1841, which my book says was the most severe since the storm of Oct. 10, 1806. In the former many lives and much property was lost on and near Cape Cod. It will be perceived that for most of the snow no depth is set down, as no depth was visible. It has been remarked that when snows hold out *late* in the spring, they will come *earlier* in the next fall.—The examination of the above table seems to indicate that to be the case generally.

In publishing my former meteorological piece in the *New England Farmer* of Aug. 7, and in the monthly issue, you made a few mistakes in the figures, which I wish you to correct, viz.:

In June, 1845, the 9th, you have 99° as the heat of that day; it ought to read 94°.

In June, 1849, the 22d, you have 94°; an error, it was 98° as the heat at 1 o'clock.

Yours, &c., ISAAC STEARNS.

Mansfield, Oct. 18, 1852.

REMARKS.—We are obliged to friend STEARNS for the interesting tables he has sent us, and regret that any errors occurred before. But errors are not always chargeable, either to the editor or printer. Our proofs are first read by the printer, whose eye is as keen as an eagle's, and then by another person while a third reads the manuscript. Even in our careful and pains-taking correspondent's article, now before us, it is difficult to tell

what some of the figures are, without a comparison of them with each other.

CHELMSFORD CATTLE SHOW.

The third annual exhibition of the Chelmsford Farmers' and Mechanics' Association was held at the middle of Chelmsford, Sept. —. The day was unusually pleasant, and the number in attendance was quite large. The Plowing Match took place in the early part of the day. We were not on the ground in time to witness it. We understand the competition was good. Ten teams were entered for the prizes—four single teams and six double teams. The shortest time in which the land (one-eighth of an acre) was plowed by the double team was 22 minutes. The committee on that department awarded premiums to the double teams as follows:—For best performance, Asa Hodgman, 2d, \$4.00; next best, Samuel Parkhurst, \$3.00; J. B. Emerson, (gratuity) \$2.00. For single team—best performance, John Sweetser, \$4.00; next best, Alvah Hodgman; 3d best, E. P. Spaulding.

The cattle pens were not so well filled as we could have wished to see them, and not as well, we know, as the farmers of Chelmsford could have had them, had they exerted themselves a little more. We trust, next year, to see a larger number. Some very good specimens of cows and heifers were noticed.

Fruit and Vegetables.—The display of fruits was very large and unusually fine. We have never seen a better show at any of our county exhibitions.

The display of vegetables was also very large and excellent. A large number of small premiums and gratuities were granted.

Bread and Butter.—The display of bread and butter was very good.

There was a respectable number of agricultural implements on the ground.

There was a great variety of domestic manufactures exhibited, showing that the Chelmsford ladies were deeply interested in keeping up this praiseworthy society. Some fifty premiums and gratuities were awarded for the various articles of household thrift and ingenuity, showing, too, that the efforts of the fair contributors met with the approval and praise of the sterner sex. We could not obtain them.

The show of poultry was pretty fair.

The address before the association was delivered by Rev. Mr. Babbidge, of Pepperell. His subject was, on the dignity of the farming profession, and the enjoyment to be derived in following it out intelligently and with zeal. We did not hear it, but it was spoken highly of by those who were present. There was also a dinner, with speeches, toasts, &c., and last evening the fair was wound up with a tea-party by the young folks.—*Middlesex Farmer.*

BITTER ROT IN APPLES.—We have been requested by a farmer of this county, to inquire of the *Prairie Farmer* or the *New England Farmer*, the cause of the bitter rot in apples, and the best remedy for it. A number of orchards have been attacked with it this season in this section of country. It commences in a tree and spreads over the whole orchard, as a contagious disease begins in a family and spreads through the whole community.

Will the editor of one or both of the above papers be so kind as to give us a remedy for this apple blight?—*Farmer and Mechanic, Danville, Ill.*

REMARKS.—We are not aware that any of our orchards have been affected in the manner described above. If such a malady exists in these regions, perhaps some of our correspondents will be able to aid their Illinois brother in his difficulty.

FOURTH EXHIBITION OF THE FITCHBURG AGRICULTURAL SOCIETY.

The fourth annual festival of the farmers of old "Worcester North" took place at Fitchburg yesterday. The day was beautiful, the weather cool, and everything auspicious. The town was crowded with farmers and their families, embracing large numbers of the fair sex, whose presence is a most pleasing feature at these exhibitions.

The display of fruit and vegetables, and plain, fancy and ornamental work by the ladies, was made in the new Town Hall. The display was beautiful in the extreme, and exceeded in variety and quality any of the previous exhibitions of the society, and spoke loud in praise of the usefulness of the society, and the intelligence, industry and thrift of the farmers of Fitchburg and vicinity, and the prolific soil of the noble county of Worcester.

The display of vegetables was very fine, particularly in squashes, pumpkins and potatoes, of which there were many fine specimens.

A most beautiful display of butter was made, the contributions being numerous, and most delicious looking. They told of superior dairy stock and skilful and accomplished housewives. We think the most fastidious could not fail to have admired the choice specimens exhibited by the fair daughters of Worcester North.

Of the important article of bread there was a fine contribution, and every lot deserved a premium. It was a substantial display, and did not fail to arrest the attention of all lovers of a good article.

There was also some boxes of delicious looking honey on exhibition.

By no means the least attractive portion of the beautiful display in the hall were the specimens of useful, fancy and ornamental articles contributed by the ladies, which contrasted finely with the noble products of the farm which surrounded them. This department embraced quilts, blankets and other useful articles:—embroidered mats, chairs, ottomans, and paintings, crayon drawings, and innumerable other articles of ornament, which showed that the fair daughters of Worcester North are not neglectful, amid household duties, of the elegant and fanciful in needle-work or the fine arts, but blend them in harmonious proportion. We would gladly notice them more in detail, but we were obliged to pass them by for want of time.

The show of farm stock in the pens on the common, though not so large or exhibiting such evidence of superior feeding, (owing to the dry and unfavorable season for rearing fine stock,) was quite extensive, and comprised some very fine animals.

There was quite a show of horses and colts; good looking animals, but calculated rather for service than for display. Of sheep there were a few,

some of which showed to good advantage. The display of barn-yard fowls was limited to a few varieties, which, however, embraced some fine turkeys, hens, &c.

At 9 o'clock the plowing match took place in the field of Mr. John Harris, on Pearl Street, about three-quarters of a mile from the village. There were seventeen teams entered, including two or three horse teams.

Immediately after the plowing match, the trial of working oxen and of working horses took place, near the Unitarian church. There were 14 single yokes of oxen entered, the task assigned them being the drawing and backing of a load of 4000 pounds. Among them were several fine teams, which exhibited superior muscular powers developed by judicious training.

At the trial of horses three spans and five single horses were entered—the load for the former being 2450, and for the latter 1730 lbs.

At a little past 12 o'clock, a procession of members of the society and others was formed in the square, and accompanied by the Fitchburg Cornet Band, proceeded to the Unitarian church, to listen to an address from Thomas E. Payson, Esq., of Rowley.

The address was well written and eloquent, and though not strictly practical, was quite interesting, and listened to with close attention.

Immediately after the services in the church the procession was again formed and proceeded to the Fitchburg hotel, where a capital dinner had been spread by Messrs. McIntyre & Jaquith for about 250 persons. Among the guests we were pleased to see a bright array of the fairer sex, whose presence is too often wanting on such occasions.—*Journal.*

For the New England Farmer.

SWALLOWS.

MR. EDITOR:—I saw a request in the *New England Farmer*, that your readers would carefully note the migration of the swallow. I have for some years noticed their departure with care, and have never seen them until this year later than the 7th of Sept. This year the last I saw was on the 17th of Sept., ten days later than I ever noticed before. I saw the "white breast" swallow on the 7th of Sept., and not after—the chimney swallow on the 12th, and the "brown breast" on the 17th. I never saw the swallow come before the 20th of April, and never before, remain after the 7th of Sept.

Yours truly, LEONARD CHASE.

Milford, N. H., Sept. 27, 1852.

REMARKS.—We are happy to receive these notices from our friends. It will hardly be necessary, however, to publish in full every letter in relation to the migration of the swallow. We are receiving so many that to publish all would occupy more space than we can find it convenient to spare, and more, probably, than would be desired by the reader. But we hope still to be favored with similar notes from lovers of nature with regard to birds and other matters of the farm; and by-and-by will compile a table from them showing the observations which have been recorded in various parts of the country.

MASSACHUSETTS HORTICULTURAL SOCIETY.

The following officers were chosen at a late meeting of the Massachusetts Horticultural Society :

- President—Joseph S. Cabot.
 Vice Presidents—Benj. V. French, Cheever Newhall, Edward M. Richards, Josiah Stickney.
 Treasurer—William R. Austin.
 Corresponding Secretary—Eben Wight.
 Recording Secretary—W. C. Strong.
 Professor of Botany and Vegetable Physiology—John Lewis Russell.
 Professor of Entomology—T. W. Harris.
 Professor of Horticultural Chemistry—E. N. Horsford.
 Committee on Fruits—E. Wight, J. Lovett, C. M. Hovey, W. R. Austin, F. L. Winship, W. C. Strong, Joseph Breck.
 Committee on Flowers—J. Breck, A. McLellan, E. A. Story, G. Evarts, A. Bowditch, T. Page, F. Burr.
 Committee on Vegetables—H. Bradlee, D. T. Curtis, A. C. Bowditch, G. E. White, A. W. Stetson.
 Committee on Synonyms of Fruit—M. P. Wilder, P. B. Hovey, R. Manning, S. Walker, E. Wight.
 Executive Committee—J. S. Cabot, W. R. Austin, M. P. Wilder, S. Walker, P. B. Hovey.
 Committee for establishing Premiums—E. Wight, J. Breck, H. Bradlee, Jos. Lovett, P. B. Hovey.
 Finance Committee—M. P. Wilder, J. Stickney, O. Johnson.
 Committee of Publication—E. Wight, J. Lovett, Jos. Breck, H. Bradlee, C. M. Hovey, W. C. Strong, F. L. Winship.
 Committee on Gardens—J. S. Cabot, E. Wight, J. Lovett, S. Walker, J. F. Allen.

SHOW AND FAIR AT CONCORD.

The Agricultural Society of Middlesex County, Mass., held its annual exhibition at Concord on the 6th inst. The large concourse of people assembled on the occasion, proved that the popular interest in agriculture is not less strong here than in other sections. This is, indeed, what might be expected from the character of the county. The writer had not till lately the opportunity of visiting Concord and vicinity, but was much gratified to find so much good land and good cultivation. Excepting on Connecticut River, it is doubtful whether there is in the State so large an extent of naturally fertile soil, as in this neighborhood.

The first object of attention in the proceedings of the day, was the plowing match, in which thirty-seven teams were engaged. Eight of these were of four oxen each, one of two oxen and two horses, and one of four horses. The others were teams of one pair of oxen or horses each. The "double teams" were required to plow nine inches deep,—the others seven.

The field devoted to the trial belonged to Simon Brown, Esq., and comprised a beautiful point formed by a bend in Concord River. We know well enough that beauty of situation has nothing to do with the questions involved in a plowing match, but as the general interest of the occasion was made up by many associations, we do not deem it irrelevant to say, that the nature of the

surrounding scenery, with various incidents, combined to make the scene one of the most attractive and delightful that we have witnessed. At a little distance below the field, on the bank of the stream, is seen the monument which marks the spot, where "fell the first of the enemy in that war of revolution which gave independence to these United States." On either hand are seen,—

"Amid the tall ancestral trees,"

venerable rural homes, having that air of neatness, quiet, and comfort, peculiar to the best parts of New England.

But aside from all historical or poetical considerations, there was more real excellence of work in this plowing match than we have ever seen in any other. Many of the plowmen acquitted themselves in a very creditable manner. Had the opportunity been given them to strike out their lands, their skill would have been put more satisfactorily to the test. We speak of the work in reference to the character of the soil, which from its depth, and a tendency in the lower portion to tenacity, required deep and thorough tilth. There was, to be sure, a wide difference in some of the lands in regard to the latter point, and we do not know that it was regarded as essential by all those on whom devolved the duty of making the awards. The *depth* only was prescribed by the rules,—the other requisites for "the best work with the least expense," having been left optional with the three committees who had charge of the three classes of teams. Their reports will be looked for with interest.—*Boston Cultivator*.

For the New England Farmer.

APPLES FOR COWS—PLOWS.

MR. EDITOR:—I would like to inquire if you, or any of your correspondents or readers, have ever ascertained by actual experiment, the effect of apples, sweet and sour, sparingly or freely given to cows, upon the *quantity* and *quality* of their milk? As there are various opinions upon the subject, doubtless a satisfactory answer to my inquiry, would oblige many others as well as myself.

I would also inquire what kind of plows are considered the *best* for turning a deep, wide, flat furrow upon grass land?

Yours truly, S. L. W.
 Groton, Oct. 12, 1852.

REMARKS.—We have made no exact experiments with the apples. Perhaps some of our readers have, and will answer your question.

The best plow for the use you speak of, we consider Ruggles & Co.'s Deep Tiller, Eagle No. 75. This plow will turn a furrow nine or ten inches deep, fifteen inches wide, and lay it over flat—provided it is held right.

For the New England Farmer.

DISEASED SWINE.

GENTLEMEN:—I am a farmer by occupation, and better qualified to hold the plow than the pen, but as my brother farmer solicits you or your readers to give the disease among his pigs a name and a remedy, I take the liberty, for his consolation and others, to call it the *Blacktooth*. The remedy is to extract them; the disease is not confined to any

particular breed. I have different breeds, and none exempt by reason of the blood, as some whole litters are attacked with it, others only in part, and others not at all. The operation varies, sometimes it causes fits, other times debility of limbs; sometimes the whole system is affected, at others loss of appetite, dizziness and shortness of breath.

I have had considerable experience this season as well as before, and have had no trouble after following the above directions.

P. S. I can furnish my brother with a few pairs of full blood Suffolk pigs, or the grass fed if desired.

Yours truly,

RICHARD WHITTIER.

Grafton, Oct. 14, 1852.

WESTERN HORTICULTURAL REVIEW.—The first number of the *third* volume of this work is before us. It is conducted with ability, printed elegantly on good, large type, and is every way worthy of an extensive circulation. The present number is handsomely illustrated. Published at Cincinnati: Dr. JOHN A. WARDER, Editor.

Will the editor give us his views in relation to the annual extensive failure in the peach crop in New England?

Mechanics' Department, Arts, &c.

A NEW AGRICULTURAL MACHINE.

The *Albany Argus* describes an invention which is designed to supersede the plow, the harrow, the roller, and the man who sows the seed. It says:

"Yesterday we were shown the model of a new, and what purports to be a valuable improvement in one of the laborious departments of the agriculturist, and for which the inventor procured a patent in April of the present year. It embodies in one implement the capacity for plowing with four plows, scattering the seed in the furrows, harrowing and rolling. The plows are ranged at suitable distances, in front of the carts, and the number can be diminished at pleasure, or four used. Immediately following and attached to the plows, are the buckets for the reception of the seed—corn included—and from which it is distributed. The harrows follow, behind the wheels of the cart, and the rollers bring up the rear. On the platform of the cart, and forming a part of it, is a basin, of the same width, which is the receptacle of the seed. Its position is immediately over the buckets, and as the cart goes forward, it is so arranged as to allow the seed to fall, in suitable quantities, in the buckets below. The platform is large enough for the driver, and will also accommodate several bags of grain. The harrows are also the width of the cart, in two pieces, as are also the rollers, for more easy passage over the ground. The entire arrangement can be removed with ease, and the cart used in other capacity about the farm.

The inventor is Mr. Henry Bebee, a young mechanic of this city. While it appears to be a valuable improvement, and has received the approbation of many distinguished agriculturists, its utility remains to be tested. There is scarcely a doubt, however, that on prairie land it will prove a valuable acquisition to the implements of the farmer."

A NEW MOTIVE POWER.—It is stated that Mr. Charles Mowry, of the city of Auburn, N. Y., has invented an arrangement by which the elasticity of compressed air can be used to propel railroad engines any distance required. The air is compressed by water power or otherwise, and carried in a tube or pipe the whole length of the road.

PATENTS.—The following patents were issued during the week ending Oct. 5:

Mighill Nutting, of Portland, Me., for improvement in expanding window sashes; Henry Clay Smith of Portland, Me., for improvement in window frames.

Designs.—Chas. B. Tuttle, of Amherst, N. H., for design for a cooking-stove; Walter Bryant, of Boston, Mass., for design for a table frame and legs.

Boy's Department.

THE ART OF THINKING.

One of the best modes of improving the art of thinking is to think over some subject before you read upon it, and then observe after what manner it has occurred to the mind of some great master; you will then observe whether you have been too rash or too timid; what you have omitted and what you have exceeded; and by this process you will insensibly catch the manner in which a great mind views a great question. It is right to study; not only to think when any extraordinary incident provokes you to think, but from time to time to review what has passed, to dwell upon it, and to see what trains of thought voluntarily present themselves to your mind. It is a most superior habit in some minds to refer all the particular truths which strike them to other truths more general, so their knowledge is beautifully methodized, and a particular truth at once leads to the general truth. This kind of understanding has an immense and decided superiority over those confused heads in which one fact is piled upon another without any attempt at classification or arrangement. Some men read with a pen in their hand, and commit to paper any new thought which strikes them; others trust to chance for its appearance. Which of those is the best method in the conduct of the understanding, must, I suppose, depend a good deal upon the understanding in question. Some men can do nothing without preparation—others, little with it; some are fountains; others, reservoirs.—*Sidney Smith.*

VULGAR WORDS.—There is as much connection between the words and the thoughts as there is between the thoughts and the words; the latter are not only the expression of the former, but they have power to re-act upon the soul and leave the stain of corruption there. A young man, who allows himself to use one profane or vulgar word, has not only shown that there is a foul spot on his mind, but by the utterance of that word he extends that spot and inflames it, till by indulgence it will soon pollute and ruin the whole soul. Be careful of your words, as well as your thoughts. If you can control the tongue, that no improper words are pronounced by it, you will soon be able to control the mind and save it from corruption.

You extinguish the fire by smothering it, or prevent bad thoughts bursting out in language. Never utter a word any where, which you would be ashamed to speak in the presence of the most religious man. Try this practice a little, and you will soon have command of yourself.

Ladies' Department.

DOMESTIC RECIPES.

WHITE CUP CAKE.—One cup of butter, two cups of sugar, three cups of flour, the whites of eight eggs, a small table spoonful of rose water, milk or cream to make a thick batter. Beat the butter and sugar to a cream. Whisk the eggs very light, and add them gradually with the flour, add the rose-water and saleratus, and if this should not be quite as thin as a pound cake batter, add a little rich milk or cream. Fill small tins about three parts full with the mixture and bake them. The yolks of the eggs which are left may be used for a pudding.

GERMAN CAKE.—Three-quarters of a pound of butter, one pound and a half of sugar, four eggs, two pounds of flour, one tea-spoonful of nutmeg, half a wine glass of rose-water, one pound of dried currants. Beat the butter and sugar together. Whisk the eggs, and add with the other ingredients. Roll out the dough in sheets, cut them in cakes with a tin cutter or the top of a tumbler. Bake in a moderate oven.

SEED CAKE.—Half a pound of butter, three tea-cups of sugar, one pound of flour, one tea-spoonful of carraway seed, half a table spoonful of saleratus, as much milk as will form a dough. Rub the butter in the flour and sugar, then add the seed, saleratus and milk. Knead the dough till it is smooth. Roll it out, cut it in cakes, and bake them in a moderately hot oven.

CURRENT CAKE.—A quarter of a pound of butter, half a pound of flour, two ounces of currants, six ounces of sugar, two eggs, a table-spoonful of brandy or rose-water, milk enough to form a dough. Rub the butter, sugar and flour together with the fruit, which must have been washed, picked and dried. Beat the eggs and add with the brandy or rose-water, and milk enough to form a dough. Roll it out thin, cut it into cakes.—*National Cook Book.*

THE THOUGHTLESS MOTHER.—"Dear mother," said a delicate little girl, "I have broken your china vase."

"Well, you are a naughty, careless, troublesome little thing, always in some mischief; go up stairs, and stay in the closet till I send for you."

And this was a Christian mother's answer to the tearful little culprit who had struggled with and conquered the temptation to tell a falsehood to screen her fault. With a disappointed, disheartened look, the child obeyed, and at that moment was crushed in her little heart the sweet flower of truth, perhaps never again in after years to be revived to life. O! what were the loss of a thousand vases in comparison!

WASHING MADE EASY.—The "crazy folks" in the Asylum at Hartford, Ct., mix a gill of alcohol with a gallon of soft soap, just as they are going to rub it in the clothes, which they then soak two

or three hours, and then merely rinse out in clear water, and all the dirt is out as effectually as good sense is out of a fellow after drinking the same quantity of the "poisonous stuff." Just tell the women that this is the easiest way to make washing easy, and urge them to try it, and you will thereafter have no reason to run away on washing-day. In washing stairs and passages, always use a sponge instead of a cloth when washing the space between the carpet and wall, and you will not soil the edges. Sponge is cheap, and this information is cheap, but it is valuable to all house-keepers.—*The Plow.*

Mexican Guano.

A NEW ARTICLE is now offered to the Agriculturist and Dealers, under the above name, from its having been found near the Mexican coast. It has been analyzed by C. T. Jackson, M. D., State Assayer, Boston, Dr. David Stewart, of Baltimore, and others. Dr. Stewart says it contains the largest proportion of Phosphates he has ever met with in Guano. The following are the result of the analysis made by C. T. Jackson, M. D.:

Water.....	23.46
Vegetable Matter.....	15.50
Soluble Salts (in Water) Phos. Soda.....	6.13
Phosphates of Lime and Magnesia.....	66.54
Insoluble Matter (Silex).....	6.10

99.92

The quality of this Guano as a rich fertilizer, and the great reduction in price compared with the Peruvian, is such as to render it an object for the agriculturist and dealers to buy and give it a trial. It has been tried in the vicinity of Norfolk, Va., and much approved by the Farmers, those who are now buying and using of it freely. It may be obtained in lots to suit purchasers of A. D. WELD, 127 State Street, PHINEAS SPRAGUE & Co., T. Wharf, or of F. A. STONE, who is the importer, and may be found at 15 Crescent Place, Boston, where also other information may be obtained respecting it. It is also for sale by Parker & White, 8 and 10 Gerrish Block, Blackstone Street, D. Prouty & Co., 19 North Market Street. March 27.

State Mutual Life Assurance Co.

OF WORCESTER.

GUARANTEE CAPITAL, \$100,000.

HON. JOHN DAVIS, President.

HON. ISAAC DAVIS, } Vice
HON. STEPHEN SALISBURY, } Presidents.

THIS Company was chartered in March, 1844, and commenced business on the first of June, 1845. Its business is conducted on the most economical principles.

The well considered and invariable policy of this Company has been to prefer the safety and mutuality of the assured to the showy advantages of a large number of policies, and an imposing amount of receipts. California risks have been uniformly declined, and the multiplication of policies in cities considered especially liable to cholera has not been encouraged.

The cash premiums of this company are calculated on the most approved tables of the probability of life, and at the lowest rates which are deemed safe.

Pamphlets, explaining the principles and advantages of life assurance, with forms of application and rates of premiums, may be had by application at the Office of the Company in Worcester, or of the Agents in all the principal towns in New England.

Dec. 27, 1851.

CLARENDON HARRIS, Secretary.

1st

Pure Devon Stock.



COWS, HEIFERS, BULLS and BULL CALVES for sale.

Apply at Office of N. E. Farmer, or to the subscriber.

B. V. FRENCH,
Braintree, Mass.

Dec. 27, 1851.

1yr

Winter Rye,

AT Wholesale and Retail, by RUGGLES, NOURSE, MA SON & CO., over Quincy Market, Boston. Aug. 28, 1852.

United States & Foreign Patent Agency.

Office, 39 State Street, corner of Congress Street.

THE undersigned, late Principal Examiner in the United States Patent Office, at Washington, D. C., offers his services to those about making application for Patents, with the hope that his long official connection with that Office, and his familiarity with its rules and practice, will enable him to give satisfaction to those who may employ him.

Those unacquainted with him are referred to the following testimonials from his late colleagues.

SAMUEL COOPER.

The undersigned, Principal and Assistant Examiners in the United States Patent Office, have for several years been well acquainted with Mr. Samuel Cooper, lately a Principal Examiner in this Office; and take pleasure in stating that he is a gentleman of the highest moral character, of unquestioned knowledge in the business and practice of the office, and that his scientific attainments are such as eminently fit him for the business in which he is about to engage.

HENRY B. RENWICK, } Principal
L. D. GALE, }
J. H. LANE, } Examiners.
T. R. PEALE, }
THOMAS T. EVERETT, } Assistant
F. SOUTHGATE SMITH, } Exam'rs.
WM. CHAUNCEY LANGDON, }
3m^t

Boston, Oct. 9, 1852.

Farm for Sale.



For sale a farm and country residence, situated in the town of BURLINGTON, 1½ miles from the Woburn Centre Depot, and 12 miles from Boston. Said farm consists of 50 acres of land, divided into Tillage and Orchards. The annual produce of Apples is 150 barrels. There are two Peach Orchards, of 75 trees each; the oldest is in full bearing, the other just coming into bearing. There is also an orchard containing 250 Dwarf Pears, in bearing, set out three years since, and selected with great care. The buildings consist of a dwelling-house, and two barns, with the necessary sheds and out-buildings, all of which are in perfect repair. One of the barns is a large one, with cellar under it. The farm is level, and easy of cultivation; the house is delightfully situated on a rise of land, and overlooks the farm.

For terms and particulars, apply on the premises, or by mail to
JOHN H. DANE.
Sept. 25, 1852. 3m^t

Choice Fowls.



The subscriber offers for sale a few pairs of each of the following breeds of Domestic Fowls, viz.: White and Buff Shanghaes, Gold and Silver Spangled Polands, Bolton Gray and Black Spanish; also, large Virginia Turkeys and Bremen Geese.

These fowls are all very fine, the spangled fowls beautiful.

H. H. LITTLE.

East Marshfield, Oct. 30, 1852.

1f 1

Houghton's Seedling Gooseberry Bushes.

FROM one to five thousand of the above-named Bushes, well rooted, for sale on the premises of BENJAMIN C. MATTENLY, Chatham Street, Lynn, at prices to suit,—from four to twenty dollars per hundred. Persons desirous of obtaining some of these much-sought for Bushes, will now have an opportunity.

Orders sent from any part of the United States will be immediately attended to. Address

B. C. MATTENLY,
Oct. 16, 1852. 4w Chatham Street, Lynn, Mass.

Farm for Sale.



A valuable Farm located in the west part of JAFFREY, N. H., within three miles of the Cheshire Railroad, containing two hundred acres of excellent land, well adapted to all farming purposes. The farm has a large supply of orcharding, mostly grafted fruit, about forty acres of heavy timbered land, is well watered with running water, and completely fenced with stone wall; there is also a valuable sugar orchard. The buildings are convenient for one or two families, and are in first-rate repair. There is a good supply of never-failing water in the same.

For further particulars inquire of the subscribers, on the premises.

August 21, 1852.

J. & J. WORCESTER, JR.

3m^t

The Farmers' Library.

JUST RECEIVED, the following assortment of Agricultural and Horticultural Books, embracing the standard works of eminent American and European writers, on the Farm, the Orchard, the Garden, &c. &c.

	PRICE.
American Farm Book, by Allen,	\$1.00
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Dana's Muck Manual,	1.00
Prize Essay on Manures, by Dana,	25
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Elements of Scientific Agriculture, by Norton,	50
Principles of Agriculture, by Thaer,	2.50
Practical Agriculture, by Johnstone,	75
Agriculture for Schools, by Blake,	1.00
Catechism of Agriculture and Chemistry, by Johnstone and Norton,	25
American Agriculturist, by Allen,	1.00
Lietbig's Complete Work on Chemistry,	1.00
Farmer's and Emigrant's Hand Book, by Marshall,	75
Home for all, by Fowler,	50
Book of the Farm, by Stephens and Skinner,	4.00
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Bridgeman's Kitchen Gardener's Instructor,	50
American Fruit Culturist, by Thomas,	1.00
Gardener and Complete Florist,	25
Florist's Guide, by Bridgeman,	50
New England Fruit Book, by Ives,	56
Yount and Martin on Cattle, by Stevens,	1.25
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Johnson's Gardener's Dictionary, by Landreth,	1.50
Rural Economy, by Boussingault,	1.00
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New England Farmer, by Cole,	1.00
Ladies' Guide and Skilful Housewife, by Mrs. Abel,	25
Hive and Honey Bee, by Richardson,	25
Bee Keeper's Manual, by Miner,	50
Bird Fancier, by Browne, paper 25 cents,	50
Townley on Bees,	50
American Poultry Yard, by Browne,	1.00
American Poulterers' Companion, by Bement,	1.00
American Fowl Breeder, by Moore,	25
American Herd Book, by Allen,	3.00
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Domestic Animals, by Allen,	75
Diseases of Animals, by Cole,	50
Hints to Sportsmen, by Lewis,	1.25
Dadd's Anatomy and Physiology of the Horse,	1.00
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Yowatt on the Pig,	60
Knowlson's Complete Cow Doctor,	25
Horse Doctor,	25
Guenon's Treatise on Milch Cows,	38
Treatise on Hot Houses, by Leuchars,	1.00
Allen on the Grape,	1.00
Loudon's Encyclopedia,	10.00
Schenck's Text Book,	50
Breck's Book of Flowers,	75
Downing's Fruit and Fruit Trees,	1.50

For sale at the Publishers' prices by RUGGLES, NOURSE
MASON & Co., Quincy Hall, (over the Market,) Boston.
April 3, 1852. 1f

PALMER'S

Second Importation of Shanghaes.



A few pairs of these choice Fowls for sale. For their merits see *New England Farmer* for March. Also, White Shanghaes and Dorkings, of Dr. Wight's stock, Dedham.

Price \$10 per pair.

Address, W. CLIFT, Stonington, Ct.
Oct. 2, 1852. 4w^t

Bound Volumes.

BACK VOLUMES of the NEW ENGLAND FARMER, elegantly bound in Muslin, Gilt and Embossed, are now for sale at this office.
Boston, March 20, 1852

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Walnut Grove Nursery.



The subscribers would respectfully inform their friends and the public, that they have on hand an unusually large stock of Apple, Pear, Plum, Cherry, Peach, and other Trees.

Also, Quinces, Currants, Raspberries, Grape vines, &c., &c.

Ornamental Trees, and Shrubs, Buckthorn Plants, &c. &c. Lot of seedling Horse Chestnut, two years old. Lot of European Sycamore, two years old. Good plants of the new and improved high bush Blackberry, the fruit of which is of enormous size.

Fine Apple Trees, three to five years' growth from bud, seven to nine feet high, \$25 per hundred.

We devote ourselves solely to the raising of trees; they receive our strict personal attention; we are therefore able to warrant every article true to name.

Those who intend purchasing large quantities of Apple Trees are respectfully invited to call before purchasing, and examine our stock, as it is large, and doubtless unsurpassed by any in the vicinity.

Trees delivered in Boston free of expense, packed if desired. Catalogues sent to post-paid applicants. All orders thankfully received and promptly executed.

JAMES HYDE & SON.

Newton Centre, Mass., Oct. 23, 1852.

6w*2

Buckthorn.

10,000 BUCKTHORN, for sale by JAMES HYDE & SON.
Oct. 23, 1852.

4w**

Pure Black Spanish Fowls.



A few pairs choice Black Spanish Fowls, raised from stock imported this season. For sale by THOMAS THACHER, Jr., at the Falcon Iron Foundry, South Boston.
Oct. 16, 1852.

3m*3

NEW ENGLAND FARMER

Is published on the first of every month, by JOHN RAYNOLDS and JOS. NOURSE, at Quincy Hall, South Market St., Boston.

SIMON BROWN, Editor.

FREDERICK HOLBROOK, } Associate
HENRY F. FRENCH, } Editors.

Terms, \$1.00 per annum in advance.

All subscriptions to commence with the volume, Jan. 1. The FARMER, is devoted exclusively to Agriculture, Horticulture, and their kindred Arts and Sciences; making a neat volume of 576 octavo pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at the office of publication.

Also published at the same office every Saturday, on a large handsome folio sheet, the

NEW ENGLAND FARMER, (WEEKLY.)

An Independent Agricultural Family Newspaper.

The News and Miscellaneous departments under the charge of WILLIAM SIMONDS, will include a full and careful report of the news of the Markets, and the news of the week, such as Domestic, Foreign and Marine Intelligence, Congressional and Legislative proceedings, Temperance and Religious Intelligence, and a general variety of Literary and Miscellaneous matter, adapted to family reading, comprising more useful and valuable reading matter than any other Agricultural Newspaper published in New England. Everything of a hurtful or even doubtful tendency will be carefully excluded from its columns.

Terms \$2.00 per annum in advance.

The monthly contains nearly the same matter as the Agricultural department of the weekly.

Postmasters and others, who will forward four new subscribers on the above named terms, for either publication, shall receive a fifth copy gratis for one year.

All orders and letters should be addressed, post-paid,

RAYNOLDS & NOURSE,

QUINCY HALL, SOUTH MARKET STREET, BOSTON.

The postage on the New England Farmer, monthly, is as follows:

For any distance not exceeding 50 miles 5 cents per year.
Over 50, and not exceeding 300 miles.....10 cents per year.
Over 300 " " 1000.....15 " "
Over 1000 " " 2000.....20 " "
Over 2000 " " 4000.....25 " "
Over 4000 " "30 " "

To prevent any misunderstanding, we quote the 16th section of the law of 3d March, 1845, which is as follows:

Sec. 16. And be it further enacted, that the term "Newspaper," herein before used, shall be, and the same is hereby defined to be, any printed publication, issued at intervals of not more than two sheets, and published at short stated intervals of not more than one month, conveying intelligence of passing events, and bona fide extras and supplements of such publication.

Fruit Trees for Sale.



The subscriber offers for sale at his nurseries at Fishkill Landing, N. Y., a large stock of Fruit Trees, embracing a large and choice variety of Apple, Pear, Cherry, Plum, Peach, Nectarine, Apricot and Quince Trees, Grape Vines, Strawberry and Raspberry plants. All of which he will sell on the most reasonable terms. Among the Apples are 10,000 Baldwin trees from medium to large size, very nice. Also a large and handsome stock of Seckle and other kind of pears.

Particular attention paid in taking up and packing trees. Priced Catalogues sent to all applicants.

CHARLES DUBOIS.

Fishkill Landing, N. Y., Oct. 9, 1851.

3w*1

Honey-Bee Feed.

ANY PERSON who will send their address and one dollar, in an envelope, post paid, to E. JORDAN, of Newbury, Vt., shall have sent him by mail, post paid, in consideration thereof, a Circular informing him—1st. How to prepare four kinds of Feed for Bees, costing 24 to 54 cents per lb. from which good honey is produced. 2d. Giving information how to use the Feed successfully, with any ordinary kind of box hive, saving the expense of buying a patent hive expressly for the purpose. 3d. Giving information how to prevent fighting and robbing from neighboring swarms while in the process of feeding.

Knowing that multitudes are anxious to obtain the above named information, and that it is more than an equivalent for the dollar asked, no apology is needed for this notice.

Newbury, Vt., Oct. 9.

3w*1

E. JORDAN.

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. IV.

BOSTON, DECEMBER, 1852.

NO. 12.

RAYNOLDS & NOURSE, PROPRIETORS.
OFFICE....QUINCY HALL.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

THE FARM IN DECEMBER.

"Have mercy, winter!--For we own thy power."

This is the season of dreary and gloomy weather. The sun rises late and sets early; noon treads upon the shades of night; the sun drops suddenly low far south of west, and before we are ready for it, sinks out of sight, when the chill air and gathering darkness soon drive us from the field.

It is now winter. The reptiles and other creatures that sleep or hide during cold weather, have retired to their winter quarters; the field labor of the farmer is considerably arrested. The trees look but like skeletons of what they were, and as Shakspeare said, are but

"Bare ruined choirs in which the sweet birds sang."

The evergreens now have a new beauty and value, and are particularly observed, while the winter flowers are looked upon as real friends. We turn to the conservatory, or even the small collection of parlor plants, with new interest and pleasure, and cultivate them with tender care.

But gloomy as is the approach of this season, "winter is not the death of nature, neither is it merely the season of nature's sleep, after the labors of the vegetable world are finished. It is much more. It is the season of gestation, when nature is preparing in her womb the embryo of the coming year. A thousand secret operations are in progress, by which the seeds, buds, and roots of future plants and flowers are not only preserved, but elaborated, that when the prolific months of spring arrive, they may burst into life in all the freshness and vigor of a new birth." The winter weather has also a most important agency in other respects. During spring, summer and autumn, fertile soils by capillary attraction absorb and retain water for the support of their produce; during winter a portion of this water at the surface of the soil freezes, and by its expansive force thrusts the individual particles apart, and so hold them, apparently, as solid clods of earth; but as the warmth of spring returns, the icy cement dissolves

from its interstices, the clods crumble down so minutely divided as materially to lessen the labor of the husbandman in preparing the soil for seed. So all seasons are important to the production and perfection of the farmer's crops; the severe winter for rest from one class, and activity in another, of operations; the spring with its high winds to sweep off a redundant moisture in the drenched fields, to start the bud and blossom, and waiting grass; the summer with its fervid heat and dewy nights to give breadth and form and substance to the plants, and autumn with its tempered suns and lengthened nights to perfect the whole.

Although the hand of the wonder-working Creator may be distinctly traced in unnumbered objects in the winter, yet it is a period when, in comparison with other seasons, there are few objects of interest to arrest the attention. Many of the important and pressing labors of the farmer being ended for the year, it leaves him opportunity for reading, for study, and reflection, and if so disposed, for the investigation of many things which puzzled him during his summer operations, and which he had not the leisure then to examine. But he has given them occasional thought, and now can gather about him such helps as he may command, and in his comfortable home, while fierce winds sweep the deserted hills and vales on their useful mission, seek out the causes and operations of things so that he will find a new interest in his labors when he again enters the fields for their cultivation. Indeed, that interest will be felt when his investigations commence, and will ever be present with him afterwards, whether following the plow, prostrating the grain or grass, or mingling in the social relations of life.

Then we have this to say:--Let each hour of this comparatively leisure season be as faithfully devoted to the cultivation of the mind and heart, as the hours of spring, summer, and autumn, have been to the cultivation of the several crops, and contentment and happiness will as surely flow

from your efforts, as the springing corn and waving grain were the consequence of your timely industry in the spring. Turn to the article on winter schools, or more properly, *Schools at Home*, at page 120, of the monthly, and in the weekly *Farmer* of the 7th of February last, and read once more the suggestions offered there. Nearly four months are before you now in which you may find opportunity to turn the current of your thoughts into new and delightful channels, elevate your minds, purify your affections, and prepare yourselves to shed untold blessings ever after upon the world around you. The gain of gold is not all—for what profiteth it a man if he have ample fields, teeming orchards, and bursting barns, with the refinements and elegancies of life, if he have not contentment therewith!

"Honor and shame from no condition rise—
Act well your part; there all the honor lies."

A beneficent Providence has so arranged things that there are duties demanding our attention at all seasons, and among them at this time an important one is to prepare a proper

SHELTER FOR STOCK.—We shall barely call attention to this subject now, with the purpose of soon noticing it more particularly. Cold acts as a stimulant to the system, and that is probably why we require animal diet in the winter more than in the summer; flesh supplying the waste occasioned by the cold more readily than vegetables. If, then, the animal is cold, it requires more food, and of a more nutritious nature, to keep up the natural temperature of the body, than when comfortably sheltered. It will, therefore, be found cheaper to protect the animal from the cold than to supply an extra amount of food.

CARROTS FOR HORSES.—The stable keepers are beginning to find that these vegetables form a cheap and nutritious food to mix with grain for their horses. It is better to give a working horse a peck of carrots and four quarts of oats or corn meal a day than to give him six quarts of meal.

FEEDING STOCK.—Owing to the excessive drought last summer, there is a great scarcity of hay and fodder, so that it becomes important that not only shall nothing be wasted, but that the utmost economy shall be practised in feeding out what we have. We therefore recommend the cutting of all coarse fodder, (hay, straw, corn-stalks and shucks,) and mixing with it a little meal of some kind, corn, oat, barley or oat-meal, or shorts, now, at the opening of winter, and thus commence with feeding out less hay than would otherwise be required. Secure to the cattle warmth, clean and loose skins by the frequent use of the card, and you will be able to take each animal through the winter in good condition, with some ten or fifteen hundred pounds less hay than they have been accustomed to consume. Where wood is cheap great advantage may be derived from cooking most of the

food fed out. Hay steamed with the grain, would undoubtedly answer the desired purpose with a considerable less quantity than if fed in an uncooked state. All kinds of feed given the store swine should be cooked.

YOUNG ANIMALS must receive careful attention. If stinted in food and exposed to the elements, they will scarcely ever assume those full, plump, and handsome proportions so desirable, do what you will for them afterwards.

POULTRY AND EGGS.—Fowls like the warm southern aspect, where they can huddle together in the sun during the middle of the day. Provide them such a place, and plenty of food, such as corn, barley, wheat, cob-meal, mixed with scalding water or hot potatoes, with occasional feeds of the flesh of young calves, plucks of sheep, and constant access to pure water, gravel, old mortar, oyster or clam shells and bones, all broken finely, and they will yield eggs in abundance through the cold weather.

PRESERVING WINTER APPLES.—Keep them in a moist cellar and at a temperature above the freezing point, but as near it as possible. These are some of the suggestions and duties appropriate to December, and close our remarks of this character for the year.

If you have followed us, kind reader, in this "Mirror of the Months," which we have presented,—a dim mirror though it may be,—and have found as much pleasure and profit in reading as we have in the writing, we shall feel that our labor has not been in vain.

For the New England Farmer.

WHY BEES DIE IN WINTER.

MR. EDITOR:—As a correspondent writing some months since in the *Farmer*, over the signature of "A Subscriber," desires to know the cause "why swarms of bees so frequently die in winter, and sometimes in other seasons of the year, without any apparent cause," and as I have had fifteen years experience in keeping bees, I am thinking it may not be amiss to give my views on the subject. From experiments and observation, I am satisfied that cold is the cause of swarms of bees dying, where plenty of honey remains in the hive. Evidence of this is found in the fact that it is more frequently the case, that small swarms (those of few in number) die in winter, than large swarms: the consequence of there not being sufficient animal heat produced in the hive to keep out the frost, or the honey sufficiently warm. And as the animal heat produced, (sometimes called the breath of bees) ascends to the top of the hive, making that part of the hive warmest, the bees also ascend or cluster close in the top; but after they have eaten all the honey in that part of the hive which they occupy, they make a move for more, which is generally once a day, and by the latter part of winter they must descend to near the bottom of the hive for honey; after which they ascend to the top again which is warmest; but as the weather

continues cold, and the honey which remains is more distant from the bees, the comb is found so cold that it cannot be uncapped by them, and so covered with frost that a portion of the bees run about the hive as though to find some new way to get at the honey, when they become chilled, and fall to the bottom of the hive, where a greater degree of cold prevents their making another move; and thus they daily decrease in number, until they become so much reduced that the remaining few are found chilled or frozen in the cells.

I have noticed that where bees die of this predicament, the cells (in a portion of the comb) instead of being uncapped, are cut through at the sides, as a last resort; this I have noticed in the case with young swarms only, as in such hives the comb is thinnest and softest. But bees seldom live when brought to this great strait. To prevent them from dying from this cause, is simply to protect them better from cold. Bees sometimes die from this cause by the first few weeks of freezing weather, if they are very few in number and are much exposed to cold. The most effectual and cheap plan of protecting bees from cold, is to make a box of rough boards, 4 or 6 inches larger each way than the hive, without top or bottom, cut a corresponding opening with the door or entrance of the hive, place this over the hive and fill between this and the hive with straw and also on the top, to the height of the box, then put a board over this with a weight upon it.

J. IDS.

East Shelby, N. Y.

MR. FRENCH'S ADDRESS.

We have been favored with a perusal, in manuscript, of an Address delivered by our Associate Editor, Mr. FRENCH, before the York County Agricultural Society, at Saco, Me., in October last.

Under his description of "the peculiar position which Woman occupies in New England Society," we make an extract, and under that of "Washing Day, another, being all we can find room for at present. We have no hesitation in saying that the Address is one of the three best we have ever seen. When the reader has perused the extracts below, he will be glad to see more of it.

Look, for a moment, at the condition of a majority of the wives of respectable farmers, aye, and of men of all other classes in your own country. What are the duties, which, by general consent, devolve upon them?

What do you, sir, and you, expect of the lady who presides over your household? Did you ever consider for a moment, how many and various and constant are her cares and trials?

You are, perhaps, an amateur farmer; you have, like a true and thriving Yankee built a large and elegant house—not so much because you need it, as because your neighbors live in fine houses.—And, besides, you are a growing man in the world, and have been Representative to the Legislature, and are *liable* to go to Congress, or be President of the United States. There is no knowing what may not befall you, and it is well to keep up appearances in the world, and be ready for any honors that may be thrust upon you.

You have a large family of children, and they

are all to be educated, and of course have no time to work. Your boys must be fitted for college, and your girls must be taught music, and French, and drawing, besides the common branches of learning. Your wife is expected to see that your elegant house and furniture are kept in order—that the children are kept neat and orderly, at all times. You have a fancy for Devon and Ayrshire and Short-horn cows, and perhaps exhibit them at the Annual Fair, and your wife must take interest enough in your affairs to look well to the dairy.

You have a great propensity to clear up swamps, and build stone walls, and improve your farm, and your kitchen is filled with *hired men*, and nobody but your wife knows what to get for breakfast, dinner or supper for them or the family.

Then you are a generous, hospitable sort of fellow, and often invite your friends from other towns, whom you happen to meet, home to dine, and your wife is relied on, to do the thing up handsomely, for the credit of the establishment; and, although the three youngest children have just had the whooping cough, and have kept her awake half the nights for the last month, the amiable lady is expected to appear at the table, dressed like the wife of a gentleman, as bland as a moonbeam, and play the agreeable to your guests, with the same matronly grace, as if she had passed the whole morning over her books and music.

You expect to see your breakfast upon the table punctually at the hour, and the children washed and neatly dressed in their places, at the table. You expect to see the table handsomely laid, and the food properly cooked and served up. You expect the good lady to be ready and at leisure, at all times, morning and evening, to receive calls of friendship or ceremony, and especially those of your own friends.

You expect to find your wardrobe always in perfect order, with no button or loop or string missing. If a child is ill, there is nobody but the mother to watch over it by night or by day, and the depressing, never-ceasing solicitude, and exhausting offices due from a mother to her *infant*, can be delegated to no other.

In short, sir, you expect your wife to be at the same time cook and chambermaid, lady and serving girl, nurse and sempstress and governess, laundress and dairymaid.

At length, you see, with a sad heart, that her eye is losing its lustre—that her form is becoming daily more frail—that the elasticity of her spirits is gone, and at last the thought, the sickening, crushing thought is forced upon you, that she, whose *youthful* image, radiant with health and happiness, has never passed from your heart—she, who alone has remained to you true and constant, through sickness and health, in trials and prosperity—she, the mother of your children, who has so long been about you and your pleasant household, like a good angel, doing all kind offices for you and your loved ones—she who is more to you than all the world beside—*may die*.

And now, perhaps, an effort is made to relieve her, and changes are effected in the household arrangements—and housekeepers and servants are procured; the daughters are called on to aid in the domestic affairs, and the grand schemes of improvement are suspended and no company is invited. But it is all in vain. The hectic flush is on her cheek, and sorrow and fearful foreboding sadden every heart.

For a time, almost like a pure spirit from the realms of bliss, she glides about from room to room, still watchful for the comfort of others, and forgetful of self.

But, I will not attempt to fill up the picture, and trace the sure decay of strength and beauty and life by slow consumption. At length "*there is rest in Heaven.*"

Have I exaggerated the trials of a New England wife? I wish it were true that no one of us could call to mind an original, from which my picture might have been drawn! I wish it were true that no one of us were conscious of past thoughtlessness, or unreasonable exactions, by which an undue portion of life's burdens have been cast upon the sex least able to bear them.

Washing-day is a day in the calendar to be remembered—a day when woman reigns supreme—*rains* in more senses than one—a day which furnishes an excuse for *cold coffee*, and a *picked up* dinner—a day when every woman claims as part of her prerogative, to wear her hair in papers and scold, and even "Kick the wee stools o'er the mickle," if she feels in the humor—a day when the Goodman of the house is brought fully to appreciate his own littleness, to feel that he is but as a grasshopper in the sight of any woman, armed with a mop or waterpail.

And this noted and justly celebrated day comprises *one-seventh* of a man's life, and he who has reached his *grand climacteric* has lived through *nine whole years* of washing days, a consideration as terrific to the young householder, as it is consolatory to those in old age, who believe that the trials of this world are to be deducted from the discipline of the next.

From the importance of this subject, involving, as it does, one-seventh of all our earthly happiness, one would suppose that philosophers and statesmen, laying aside their other schemes for the amelioration of man's condition, would have devoted themselves exclusively to the abolition or mitigation of washing days.

"But the world has gone on," as Dickens has remarked, "and revolved round the sun, and turned on its own axis, and had lunar influences, and *various games of that sort*," and washing days have come and gone, and the human race has rather increased than lessened in numbers, and men have settled down upon the idea, that the trials of that dreadful day, like the existence of sin on earth, are to be reckoned among the inscrutable dispensations of Providence, to be patiently endured, with such courage as we can put on for the occasion.

To be sure, like old father Adam, in the garden, men are prone to charge this evil, like all others, upon the *woman*, and I propose, by way of illustrating my subject, to bring the question directly before the appointed tribunal, whether the worst trials of washing day, like most others of domestic life, are not fairly chargeable upon the want of proper attention and foresight on the part of the *men*.

And I charge upon our prisoner, in the first place, that he and the large class whom he fitly represents, have not made suitable arrangements for the convenient supply of the two essentials of housekeeping—*wood and water*.

Your *wood-house*, sir, is not near enough to your

kitchen. Your wife is obliged to go out of doors in summer and winter, to reach it—perhaps to go down a flight of steps, and bring her wood up.—Often she finds no dry fuel of suitable kind cut and split for use, and you would be ashamed to have it known, how many times she has taken the axe into her own hands to make up for your negligence.

And then the *water*—we have all seen it again and again, and you cannot deny it. Instead of having a cistern of soft water, with a pump in your wash-room, or an aqueduct leading into your house, you have, year after year, depended on a well of hard water, *five rods* off, with a well post that leans hard to the east, and a sweep loaded with old *cart boxes*, at one end, and a crooked pole and leaky bucket at the other, and the girl whom you took young and blooming from her home, and vowed to love and cherish, goes there, day after day, and year after year, and draws water for her household!

And, again, what sort of a *washboiler* does she use? Is it nicely set in brickwork, in a convenient place for use, or does she hang a big kettle on the crane, half the length of the house from her wash bench, or is she, for want of a better, compelled to use a half-sized tin boiler on the cook stove in dog days?

And where is her *clothes line*? Have you provided, in some sunny spot, sheltered from the winds, one of the rotary frames lately introduced, on which the whole wash may be hung by a woman in a few moments without moving her basket, or have you some convenient out-building, where the line may be kept always stretched, without being slackened by the weather?

No such thing, sir. In the first place, the line is not half long enough, for you never have returned the piece you borrowed to tie up your broken wagon shaft, and you never paid any attention to the oft-repeated, quiet suggestion, that things were not exactly convenient for drying the clothes, and so the females of your household, after working in a hot room over hot water, half the day, must find a place to dry their clothes as best they can. And we all know how it is done, for we see it every Monday of our lives.

The line is first tied to the old *well post*. It is then carried to a *post in the garden fence*, next, a long stretch is made to the *old sweet apple tree*, and a turn taken round one of its principal limbs—then round the latch of the wood-house door, and lastly back to the *well post* forming an irregular parallelogram, with the longest sides supported by the long-handled pitchfork and the rake borrowed from the barn for the occasion!

And now, what says the accused to our charges? It will avail nothing to set up *poverty* in his defence, for as has been truly said, "no man is so poor as to be obliged to have his pigs-trough at the front door," and we may add, no man is too poor to split his own firewood, and bring the water to wash with.

And so he may as well plead guilty, and save our jury the trouble of a verdict, and henceforth, we will charge a fair proportion of the trials of washing-day upon the neglect to provide the best possible conveniences for performing what is at best a disagreeable office in housekeeping.

I have ventured upon this mode of illustrating what I deem, after all, a subject of serious interest, *the busy and careworn life of New England*

These burdens which bear so heavily upon the wives of our farmers as to constitute a great objection to the choice of agriculture as a business, with any considerate man, result, as we have seen, in part from the want of *servants* or reliable *help*. This difficulty arises legitimately from the principles of equality, inherent in the constitution of our government, and which we should not seek to change.

But this is by no means the whole secret of the trouble. Much of it results from causes which lie within our own control, to some of which allusion has already been made, and others may readily be named.

A RARE AND INTERESTING BOOK.

"MARKHAM'S FAREWELL TO HUSBANDRY, or The enriching of all sorts of Barren and Sterile grounds in our Kingdome, to be as fruitfull in all manner of Graine, Pulse, and Grasse, as the best grounds whateoener: Together with the annoyances, and preservation of all Graine and Seede, from one yeare to many yeares. As also a husbandly computation of men and cattels dayly labours, their expences, charges, and vttermost profits. For the bettering of arable pasture, and woody grounds: Of making good all grounds againe, spoiled with ouerflowing of saltwater by sea-breaches, as also the enriching of the hop garden, and many other things neuer published before." Such is the promising title. The book was printed at London, in 1623, two hundred and twenty-seven years ago.

Under the same covers there are four other books showing that the "old 'uns" knew something about farming as well as other things. Here is one entitled "A New Orchard and Garden, with the Country Housewifes Garden for herbes of common vse. As also The Hvsbandry of Bees, with their severall vses and annoyances, all being the experience of 48 yeeres labour." This is illustrated by rude engravings of buildings and grounds about them, of planting and trimming trees, kitchen and flower gardens, bee houses and hives, and the notes of music describing the songs which the bees hum out at various times.

But the queerest title of all the five books is the following:—"Covntrey Contentments, or The English Hussvife. Containing The inward and outward Vertues which ought to be in a compleate Woman. As her skill in Physicke, Surgerie, Extraction of Oyles, Banqueting-staffe, Ordering of great Feasts, Preserving of all sorts of Wines, Conceited Secrets, Distillations, Perfumes, ordering of Wool, Hempe, Flax, making Cloth, Dying, the knowledge of Dayries, office of Malting, Oats, their excellent vses in a Family, Brewing, Baking, and all other things belonging to an Housebold.

A work generally approved, and now much augmented, purged and made most necessary for all men. London: 1623."

In addition to all the wonderful things set forth in the title page, Mr. Gervase Markham invades

the kitchen, the nursery, and medicine chest, and sets forth the peculiar duties of the housewife in a great many particulars. We cannot resist the temptation to give one or two short extracts—and first, this—

SHEE MUST BEE TEMPERATE.

Next vnto this sanctity and holinesse of life, it is meete that our English Hous-wife be a woman of great modesty and temperance as well inwardly as outwardly; inwardly, as in her behauiour and cariage towards her husband, wherein she shall shunne all violence of rage, passion and humour, coueting lesse to direct then to bee directed, appearing euer vnto him pleasant, amiable and delightfull; and though occasion, mishaps, or the misgouernement of his will may induce her to contrarie thoughts, yet vertuously to suppress them, and with a milde sufferance rather to call him home from his error, then with the strength of anger to abate the least spark of his euill.

OF HER GARMENTS.

Let the Hus-wifes garments be comely and strong, made as well to preserue the health, as adorne the person, altogether without toyish garnishes, or the glosse of light colours, and as farre from the vanity of new and fantastique fashions, as neere to the comely imitations of modest Matrons; let her dyet be wholesome and cleanly, prepared at due howers, and Cookt with care and diligence, let it be rather to satisfie nature then our affections, and apter to kill hunger then reuiue new appetites, let it proceed more from the provision of her owne yarde, then the furniture of the markets; and let it be rather esteemed for the familiar acquaintance she hath with it, then for the strangenesse and raritie it bringeth from other Countries.

The whole subject of agriculture in all its various branches, is thoroughly treated in these curious books. We have preserved the ancient style of spelling and using capitals.

For the New England Farmer.

WHAT IS THE BEST METHOD OF PRESERVING CELERY?

MESSES EDITORS:—As celery is a vegetable which but few cultivate, and fewer still, I believe, properly appreciate, and as it always commands a high price in the market, especially in the winter and spring, it becomes an important practical question, how it can be best preserved. Some cultivators recommend placing it in water in the cellar. Others advise to bury the plants in dry sand, and others still, in rich loam. Having tried some of these methods, and not with satisfactory success, I wish to elicit the results of the experience of other cultivators of this very great luxury for the table. If some of your numerous and intelligent correspondents, or yourselves, will favor the public with wisdom on this point, one of your constant readers, and many others, I presume, will be thankful.

D. C.

Waltham, Nov. 19th, 1852.

☞ If you have a friend that will reprove your faults and foibles, consider you enjoy a blessing which the President of the United States cannot have.

For the New England Farmer.

IS FARMING AS PROFITABLE AS OTHER OCCUPATIONS?

Almost any person at first thought is ready to answer this inquiry in the negative, and such would seem to be the just conclusion of an individual, witnessing the routine operations of the farmer, toiling day after day, and year after year, without making any perceptible headway, and frequently finding it difficult to determine which exceeded, whether it be his imports or his exports.

Let the same individual turn to the mechanic—whether it be the tailor, the shoemaker, the carpenter or the blacksmith, and ask himself if the mechanic appears happier, fares better, lives easier, grows rich faster, or has better health than the farmer. Again, let him turn to the mercantile community—there he beholds gorgeous palaces, decorated with all the beauties which architecture can bestow; the floors covered with rich webs of Brussels carpets and trod by slippered gentlemen and silk and satin-clad ladies; he is ready to exclaim, *trade* is profitable, and he would willingly enlist himself in the enterprise under auspices so favorable, but shrinks back when he learns that at least one-half (*a.*) of all who engage in that pursuit become bankrupt, that the liabilities of the lord of this stately palace, are beyond his means—and his paper is not worth a farthing in State or Wall Street.

I am aware that some men drop the mercantile business, take up farming, and fail for want of practical knowledge in the art; this is an exception and goes no farther to condemn the occupation, than would be that of the cobbler against ship-building, because he did not succeed in making a seventy-four frigate.

It is true, the farmer has not much chance for making a fortune in a day, nor of losing one in a night; his business is safe, as well as profitable, generally speaking, if he understands it—not altogether profitable in dollars and cents, but profitable for his health, for which, probably, no other occupation is so good; it may teach him economy, where others might lead to extravagance—it may be profitable for his children, inculcating habits of industry to the youth—while others would predispose them to idleness, dissoluteness and crime.

But the farmer *can* make his business profitable in dollars and cents—he has only to increase the fertility of his soil to “cause two blades of grass to grow where but one grew before”—he can rear choice breeds of stock, and feed them well—this will augment the products of his dairy—his dairy will increase his capital stock in the hog-pen; he can chequer his farm with select fruit trees, which in due time, will repay all capital invested—and return a higher percentage than any dividends yet declared by the directors of most of the railroad companies. While doing this, he is increasing his capital stock—that is, he is making his farm more valuable, and he is worth the more dollars.

The question has been asked, “what is life without health?” I would ask what are life and health without enjoyment? Who then can claim more enjoyment than the farmer; who, more than he, can gratify himself with all the beauties which nature has spread around, so eloquently described by the poets. The sunny slope, the forest glade, the

willow-margined stream are all his own—the carol of the blue-bird, the lark and the robin salutes his waking moments, and the lovely whip-poor-will chants his evening lullaby. Yes, there is poetry in farming—the “Peasant Bard” will doubtless agree with me, that it is favorable to the development of poetical genius.

H. F.

Stowe, Oct., 1852.

REMARKS.—(*a.*) The number is considerably more than *nine-tenths* in the city of Boston. The above views of farming, as an occupation, are just. “H. F.” is welcomed to our columns.

WORCESTER WEST SOCIETY.

The following remarks are a portion of a speech made by FRANCIS BREWER, Esq., at the Worcester West Agricultural Society on the 30th Sept. last. Mr. Brewer is a member of the Massachusetts State Board of Agriculture, and an ardent advocate of progress in the art.

Delegated by that body which the Legislature of our commonwealth has constituted the head of her agricultural interests, I am with you to-day, not in the character of those whom Joshua sent secretly as *spies* to view the land of Jericho, but as a friend and brother; having just severed myself from the enjoyments of our own family festival, that I might present to you the warm right-hand of fellowship and of friendship, from your agricultural friends in my own native valley.

I have no credentials to present, nor any official instructions of duty to pursue, furnished me as the representative of that body who delegated to me this duty, but I relieve myself of much of the embarrassment incident to my position, by borrowing the use of a commission found in a volume of ancient records; and although dated prior to the establishment of any agricultural association, is still so pertinent to the present occasion that I have appropriated it to my own benefit; it is brief yet very explicit, and comprehends many of the leading agricultural statistics which it is our purpose to collect; and if old things are to become new, I shall need offer no apology for my appeal to the *higher law*, for my authority. It is the commission and instructions which Moses gave to those whom he delegated to visit and examine the land of Canaan; allow me to read it; he says to them, “Get you up this way—and go up into the mountain and see the land what it is, and the people that dwell therein, whether they be strong or weak, few or many; and see what the land is that they dwell in, whether it be good or bad; and what cities they be that they dwell in, whether in tents or strongholds; and see what the land is, whether it be fat or lean, whether there be wood therein, or not, and be of good courage and bring of the fruit of the land.” These, sir, are my assumed credentials, and we may safely infer from the record, that these instructions were given not far from this season of the year, for it says, “now the time was the time of the first ripe grapes”—and such grapes! such native grapes too, with such evidence of the abundant fertility of the soil, it is no surprise that my illustrious predecessors made their report, that it was a land flowing with milk and honey. I may safely presume that such are not indigenous to your soil, although the cultiva-

ted ones now before me are a splendid sample. I will therefore satisfy myself from the demonstrations which have this day been presented from the departments of agriculture, horticulture and the domestic manufactures, from your flocks and herds, that, if this is not strictly a land flowing with milk and honey, it is literally a land *over-flowing* with all the substantial comforts and conveniences of life, and possessing as many of the luxuries as it is convenient to enjoy, furnishing the most unequivocal testimony to the judgment and well directed labor of the farmer, to the skill and ingenuity of your female artizans; and that the land you dwell in is fat and good, that your people be many and strong—that they dwell in strong holds and have monstrous barns well filled, and plenty of wood.

Almost an half century has passed since that record was made; and yet it remains with all its freshness among the thrilling incidents which have since transpired, as fresh and fragrant as when first impressed. It was, sir, the *first* (a) agricultural exhibition ever made in this country. And it was the birth-day of our *elder sister*—she of whom it may be said is the mother of all the Agricultural Societies, now scattered over our Union, from Maine to California,—thirteen of which are within our own borders, and the youngest of which, I have the pleasure of participating with to-day, if not to witness its birth. I may venture to say christening, unless I have lost time, for in this age of *progress* and improvement, children are born by *express* and christened by *telegraph*, fearing their names would not otherwise overtake them in this world; but pardon me, sir, I think it a promising child, well worthy to receive your fondest paternal and I may add too *maternal* care. She is now for the first time initiated into the embrace of her sister societies. And we bid you a hearty and a cordial welcome. Young as she is, we cannot apply the figurative expression of Solomon to her, “that we have a little sister and she has no breasts,” for I see the breast of every member of this society is fully extended with the highest aspirations for the future welfare and destiny of the society. Go on, then, Mr. President and gentlemen, fulfill your destiny, and your laurels shall be interwoven with that wreath of glory which encircles the character and honor of Massachusetts.

REMARKS.—The Middlesex County Society was incorporated in the year 1803, and had existed as an unincorporated association, under the same name, from the year 1794. We had supposed it the oldest County society in the State. “The Massachusetts Society for promoting Agriculture” was incorporated in 1792.

THE GARDEN.—Daniel Webster writing to the overseers of his farm in Franklin, N. H., last March, uses the following truthful language of cultivation and the garden.

“Whatever ground you sow or plant, see that it is in good condition. We want no *pennyroyal* crops. ‘A little farm well tilled’ is to a farmer the next best thing to a ‘little wife well willed.’ Cultivate your garden. Be sure to produce sufficient quantities of useful vegetables. A man may half support his family from a good garden. Take care to keep my mother’s garden in good order, even if it cost you the wages of a man to take care

of it. I have sent you many garden seeds. Distribute them among your neighbors. Send them to the store in the village that everybody may have a part of them without cost.”

For the New England Farmer.

BROOM CORN.

Having cut the brush, the next step in the process is to cure it. Its value depends much upon the manner of curing. If suffered to become heated, its color will be changed and the buyer will say, “’tis nought, ’tis nought.” Some bind it in small bundles, others do not. If bound, it requires less room to dry it, and it is in a better form for scraping.

When thoroughly dried, then comes the scraping process. This consists in removing the seed from the brush, by drawing it through a scraper, composed of two elastic steel plates curved outward at the top and pushing hard against a pointed rod, standing erect. It is considered a day’s work to scrape two hundred pounds. After scraping, the brush is firmly bound in small bundles, and is then ready for the manufacturer.

The cultivator often finds it necessary to retain his brush for several months, and his care is not to cease with the removal of the seeds. ‘Rats and mice, either because they know that “the new broom sweeps clean,” or because they feel a deep interest in all the operations of the farmer, and wish to *rat-ify* all his proceedings, are sure to domicile in the newly scraped brush. Broom brush, therefore, needs the same protection as Indian corn.

Productiveness.—An important question with the farmer is, “will it pay?”

There are many contingencies affecting the answer to this query. The quantity of brush varies from 300 to 1300 lbs. per acre, according to the condition of the soil, and the skill and faithfulness of the cultivator. In the towns above named, the average yield don’t vary much from 750 lbs. The quantity and quality of the seed varies still more. An early frost destroys the seed entirely. If the land is cold, from too much clay, the seed is liable to be chilled in part, or wholly. When the seed ripens well, the cultivator expects ten bushels of seed to every hundred pounds of brush. Hence, if accurate in my estimate above, the average product of an acre is seventy-five bushels. One hundred bushels of seed and one thousand pounds of brush, is not a very uncommon product in a good season.

Broom seed, for all purposes, except feeding horses, is worth as much as oats. It is heavier, and for feeding swine, cattle, sheep, and even horses, it is really worth more than oats, though it does not command so high a price. When oats sell for fifty cents, broom seed is worth about thirty-seven and a half cents. It is generally estimated that the broom seed, in an ordinary season, is worth as much as an oat crop would be, on the same land. The price of brush varies from two and a half cents to fourteen. The average for the last twenty years, I think, has been as high as six cents per pound. At five cents, cultivators regard it as a better crop than Indian corn at one dollar per bushel, provided the seed ripens.

Taking seven hundred fifty pounds as the average crop of brush, and sixty bushels as the average for seed, and allowing six cents as the price

of brush, and two shillings per bushel for seed, we have, for the product of an acre \$65.00.

Allowing one thousand pounds, which is not uncommon, and one hundred bushels of seeds, and we have as the product of one acre, \$93.30.

The expense of cultivation differs not essentially from that of Indian corn. It may be a little more. The amount of manure required is less. It exhausts the soil far less than Indian corn, or potatoes. I know of plats of ground, which have been planted with broom corn more than twenty years in succession, and their owners tell me, that they produce more now than at first.

It will be seen from what I have written, that with suitable soil and climate, broom corn may easily be produced; and that, ordinarily, it is among the most remunerative crops raised in New England.

It should be borne in mind, however, that there is but a limited demand; and, whenever the supply exceeds the demand, it becomes a losing business. Hence, the fluctuations in the market. When the farmers in Ohio engage in the cultivation of it, as they occasionally do, the business is ruined in Massachusetts. Last season, brush was brought from Ohio and sold at Northampton, for three dollars per hundred. We cannot grow it for that. One word about plows and I am done.

Messrs. Ruggles, Nourse, Mason & Co., whose skill, untiring industry and eminent success in improving and perfecting agricultural improvements should commend them to every tiller of the soil, have prepared a plow with special reference to broom corn stubble. With an ordinary plow, it is found difficult to cover the stubbs. If left exposed, they are troublesome, rendering it difficult to cultivate the lands or to reduce it to a sufficiently even surface to seed for grass. This plow is so constructed as to cut and cover eighteen inches, and if necessary, twenty-one inches. The rows are ordinarily three feet apart, seldom more. With this plow, every second furrow will cut and cover a row of stubbs, leaving the surface smooth and burying the roots where they will no more annoy the cultivator, but nourish the succeeding crop. This plow has been tested in several of the river towns, on broom corn land, and found to accomplish all that was designed. I would recommend it to broom corn tillers, and feel confident they will find it for their interest to be possessed of this labor-saving machine.

R. B. H.

THE FARM OF B. V. FRENCH.

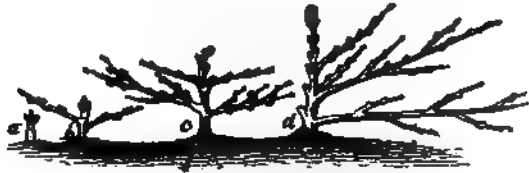
I had the pleasure a few days since of visiting the farm of B. V. French, Esq., of Braintree, ten miles south of Boston, on the Old Colony Railroad. It consists of about 180 acres. Some of it is yet in the condition in which the drift agency left it, covered and filled with boulders. This shows what the whole was before Mr. French had the management of it. Large portions, however, I should think much the larger part, are completely reclaimed, and what a change! From the most unseemly, it has become the most lovely. The man, who has wrought the transformation, must be set down as a public benefactor. My stay with Mr. F. was short, and he, as such a man of course must be, was much engaged. I cannot therefore give statistics of his farming operations. But such quantities of fruit, apples of every variety, pears, peaches, plums, melons, and more than I can

name; such crops of every description; such animals, horses, oxen, cows, and swine of the choicest breeds; such an amount of labor going on, and all so orderly, so perfectly reduced to system; every thing, from the flower garden to the large corn-field, and from the strawberry patch to the great orchard with its tempting fruit in almost boundless profusion, so as it should be, as a gentleman of taste would wish it, and as an economist would say it ought to be; such combinations of beauty and utility; I never saw the like; whether Adam and Eve did in Paradise, is more than I know. Nothing pleased me more than the kind and respectful intercourse between the master of the premises and those in his employ. There was an exhibition of mutual confidence and fidelity which was truly admirable. In a meeting between Mr. F. and his leading men in the evening, at which I was permitted to be present, the whole doings of the day were brought into review, and everything was arranged for the next day, so that every man on the place must have known his duty, and no time could be lost by the men waiting for each other, or waiting for orders from the employee. The farm, so far as reclaimed, is enclosed in lots of from one to three or four acres, by stone walls. The walls are built in the very best manner, and extend from 3 to 4 feet below the surface, to at least 5 above. Gates are placed between the street and the lots, also in the cart path from one lot to another. These, as well as every thing else, are of the most substantial construction, plain, but neat as can be imagined. After riding and walking with Mr. French over much of the farm, as we came to an eminence, whence nearly the whole could be seen, he addressed me, as nearly as I can recollect, in the following language. I only wish I could give his emphases. "When God created our first parents, he put them into a garden. In that garden were all manner of trees, pleasant to the eye, and fruits good for food. And why did he put them into a garden? That they might dress it and keep it. They were to see every thing pleasant, and to enjoy every thing good; and they were to work. I have always thought that to make a garden and to dress it and keep it, was the pleasantest thing a man could do in this world. When I was in the city, I sighed to be in the country. Since 1817 I have been trying to make a garden. I have made mistakes. Some things I have had to do over again. In some I have been fortunate, and in others unfortunate; and here it is; from this point, you see what I have done." I left him with the belief that he is a happy man, and with the wish he may long enjoy the fruits of his enterprise. I might add that Mr. French is a member of our State Board of Agriculture, one from whose example, though not all could safely imitate, yet all could learn much that is useful. We cannot all do as such men do, but we can all do better for what they do.—*Hampshire Express*.

The Secretary of the Hampshire Agricultural Society, J. W. BORDEN, Esq., will please accept our thanks for a complimentary ticket to attend the late Exhibition of that Society. Numerous engagements prevented an attendance.

The better animals are fed, and the more comfortable they can be kept, the more profitable they are, and all farmers work for profit.

TRAINING SHRUBS AND TREES.



DIFFERENT STAGES OF TREE TRAINING.

THERE is an increasing taste for the beautiful, as well as the useful, among those who cultivate the soil. Commenced by amateurs, perhaps, it has found its way into the gardens and farms of the country, and is giving them an air of grace which adds greatly to the attractions of home. And to the astonishment of many, they have found that the cultivation of the beautiful in the careful training of trees, has added much to the cash value of the farm, while they annually furnish the most profitable crops. Pears, apricots, nectarines, peaches and the Siberian crab, may all be trained so as to become highly ornamental and profitable. But little space is required, no hard labor, and a quick return may be realized.

As November is a good season for transplanting and preparing trellis-work or walls to train upon, we improve it to present some specimens of training, with suggestions and explanations from *Cole's American Fruit Book*. A dwarf tree in the espallier form drives no bed of vegetables or border of flowers from the small garden spot, but gives it an air of taste and refinement, and oftentimes a return in a single season of several dollars in cash for its products.

This mode of training is also useful in surrounding and protecting the garden, or at least in defining its limits. It may be done, too, with the cheapest materials, and with no more skill than all possess who have the slightest taste in horticultural matters.

"Our climate is so warm, that training fruits in a southern aspect to walls, fences, buildings, banks, &c., for the purpose of obtaining greater heat, is necessary with only a few southern or foreign fruits, in the North. Most varieties cultivated in the temperate region, come to perfection, even in New England, in the common tree form.

Yet training is sometimes useful to obtain a due degree of heat; it is also very ornamental and convenient in a garden, giving a beautiful and tasteful appearance, economizing room, and furnishing superior specimens of fruit. There are various modes suited to different purposes, situations and tastes.

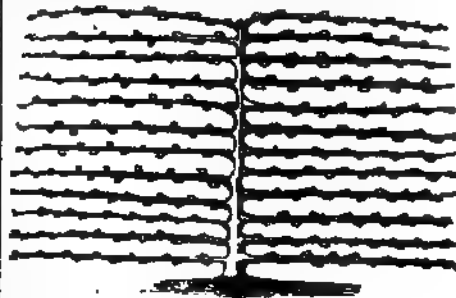
TREE TRAINING differs from common tree form in the production of low and extended branches, caused by cutting back the stem, and checking the upper limbs, until the lower ones become large and

strong from the full force of light and heat. It admits of modifications, and is adapted to various purposes, and to almost every species of tree or plant. [See first cut.]

FAN TRAINING.

After one year's growth of the young tree, scion, or vine, cut off the main stem, (figure a,) leaving buds on each side. Next season, train a branch each way, and a stem upward, which cut down as before, (figure b.) The third season, train a new branch each way, and the stem upward, and cut back again, (figure c,) and train small limbs on the lower branches, on each side, or on the upper side only. Another season train up a stem and cut down again, training out another branch on each side, and limbs on another branch, (figure d, showing one side.) In most other modes, the top and upper branches are kept back, to induce low branches, and give them a strong growth first.

FAN TRAINING is a convenient form, and is much practised with grapes, peaches, nectarines, apricots, plums, figs, &c.



HORIZONTAL TRAINING.

HORIZONTAL TRAINING is a very neat and ornamental mode, giving a good exposition to light,

heat and air. It is practised with grapes, pears, apples, &c. The distance between the laterals should be from 10 to 20 inches, according to the size of the tree or vine."

STRUCTURE OF VEGETABLES—ORGANIC FUNCTIONS.

A plant consists externally of, 1, root; 2, stem; 3, leaves; 4, fructification, or flower and fruit.

The root fixes the plant in the earth, serving the double purpose of holding it in place and position to receive nourishment, and also of absorbing from the earth those substances which are essential to its nourishment and vital action. The stem consists of pith, wood, and bark. The internal structure of the plant is composed of cellular tissue, woody fibre and a system of spiral tubes, which are each disseminated through the plant, and serve important purposes in the vegetable economy. The pith consists mostly of cellular tissue. This part of the plant sometimes constitutes nearly the whole stem, as in the cane and Indian corn. The pith sometimes furnishes a very nutritious and agreeable diet, as is the case with the sago palm, whose pith is used by us for puddings, being the common sago of the shops. It is highly probable that the pith of our corn would make, if prepared aright, an article equally salubrious and pleasant for the table. The cellular tissue, the woody fibre and the spiral tubular system all serve for absorbing and transmitting the proper food of the plant and for respiration. This last function has been supposed to be performed by the spiral system, which, however, is considered to be disproved by the experiments of Darwin and Knight, which show these vessels to be the channels through which the sap is conveyed. Every part of a plant is covered with a cuticle or skin, like the bodies of animals. Beneath this is a cellular integument; and under this the bark and wood.

Though vegetables absorb water and the atmospheric gases at all points of their surface, it is particularly by their roots that they absorb it in greatest quantity. They are capable, however, of sustaining life by merely the absorption of their other parts. Some interesting experiments were made in Scotland many years ago on this point, which fully proved this fact. A tree was grafted on to two others, standing each side in contact, and after the connection by the grafts had become complete, the stem was sawed asunder, leaving no communication with the roots and the ground. It was connected, however, with the roots of the supporting trees. It lived and flourished as well as before. This experiment proves another fact more satisfactorily, that the vegetable structure is capable of transmitting the sap in either direction, which has also been proved by other experiments with colored liquids.

We are permeated with many substances, and

particularly with carbonic acid, is carried up by the roots into the stem, and by the spiral vessels conveyed to all parts of the plant. Or perhaps the carbonic acid is formed in the plant by the absorption of air in the upper portion of the plant and its mixture with the water absorbed by the roots. This composes the sap, and is carried to all parts of the vegetable, and lastly to the leaves, where it is transformed into the proper juice of the plant, and returned to all parts again. It is in this returning circulation, that the oils, rosins, gums, and odors of the plant are produced.

For the New England Farmer.

A WORD TO YOUNG MEN.

The long evenings which you may now enjoy present to you golden opportunities for the acquisition of knowledge and the improvement of your minds. You cannot expect the tide of fortune gently to take you up and bear you on to glory and renown. No, if you ever hope to fill the stations, perform the duties and bear the responsibilities of *men*, you must trim your sails and set them to the breeze. If you look around you upon the most distinguished men in active life, you will find that they did not attain their present position without labor and effort. They did not lazily fold their arms and close their eyes upon the perspective of life, but they put forth all their energies to accomplish the end they had in view. So must you, if you ever expect to distinguish yourselves in anything great or good. Seize then the "golden ball of opportunity," and improve the hours which can be spared from the laborious duties of life, and consecrate them to the improvement of your minds, and the acquisition of useful knowledge. Thus, and thus only, can you become really useful and distinguished members of society, and reasonably hope to be a blessing and an honor to the world. Do not let the delusive phantom of a want of genius deter you from entering upon this work of self-improvement. As Longfellow has beautifully expressed the sentiment,

"Lives of great men all remind us,
We can make our lives sublime,
And departing, leave behind us
Footsteps on the sands of time."

Read over the lives of some of the most distinguished men, and see from what small beginnings they raised the superstructure of their celebrity and renown. If you feel an interest in any particular branch of knowledge, begin that study; pursue it with diligence, and you will soon be surprised at your progress. Difficulties, which at first sight appeared insurmountable, will vanish before you, and you will be cheered with the thought, that you are daily increasing in knowledge and wisdom. Cultivate your moral as well as your intellectual powers, and endeavor to impress upon everything around you an influence for good. Thus shall you live a life that shall be honored of God and man, and make you a name that shall live when you sleep in the dust. The boundaries of science are every day extending. Every year brings with it some new discovery, which will continue to affect the condition of mankind through all coming time. Every year witnesses some new triumph of human genius and industry, which will

contribute to the increased happiness of millions of the human race, and spread the elements of civilization and refinement to the remotest ends of the earth. We cannot even contemplate without astonishment the rapid progress which has been made in almost every branch of science and art, within the short space of fifty or one hundred years; and it cannot be that human reason and industry have yet achieved for us all of which they are capable; that the world has yet reached the culminating point of its greatness, either in intellectual, moral or social excellence. No, far otherwise. We believe, that in centuries to come they will achieve yet mightier conquests, and bequeath still greater blessings to the family of man. Young men, be up and doing, then. Resolve humbly, yet firmly, that through the blessing of God you will be prepared to act your part in the world's grand drama.

T. D. W.

Acton Centre.

R. I. HORTICULTURAL SOCIETY.

We have received a beautifully printed pamphlet containing the Address of GEORGE H. RUSSELL, Esq., of Roxbury, before the Rhode-Island Society for the encouragement of Domestic Industry, and the Rhode-Island Horticultural Society, at their third Industrial Exhibition in Providence, on the 17th of September last. We should be glad to lay every line of it before our readers, as we should be glad to spread all this gentleman's writings on similar topics broadcast over the land. But we are able only to give a few extracts, beginning with

A GLANCE AT BY-GONE AGES.

The industry of by-gone ages, if it could be faithfully delineated, would give a picture of national and domestic life, which might be studied with interest and instruction. It now comes to us in fragments, garnered from crumbling tombs and buried cities. It peers from the canopy of sand wreathed over broken statue and fallen temple. It tells its tale of misery on idol and obelisk, where its own hands have written, in the everlasting granite, a memorial of its wrongs and sufferings. It lies strewn on plain and hill-side, to arrest the pilgrim, and point out for what it toiled, and starved, and died. It shows how, at the will of priest and despot, it carved out their theology in black basalt, left the Sphinx to crouch, with her unsolved riddle, by the eternal pyramids, raised the chanting Memnon to salute the morning with his, now unstrung melody, and burdened the encumbered earth with huge, unmeaning monuments, that unnamed kings might moulder in forgotten graves. Poor humanity groaned out its agonized existence, that at some distant day, when the Arab should pitch his tent on mounds covering regal palaces, the curious stranger should unfold the long hidden customs of Assyrian life, and laying open the abodes of Monarchs and the altars of unknown rites, bear to far off lands the symbols of old religions, and the ensigns of ancient sovereignty.

The desolating wars which make up history, leaving little to be told except the shock of armies and the results of conquest, have been fatal to the advancement of the human race. True progress recedes from the clash of arms. Silence reigns in

shop and factory at the flaunting of martial banners, and rural toil ceases when the drum beat tells that men are to be harvested. "The thunder of the captains, and the shouting," are the death knell of industry. It flourishes where they are never known, and rejoices only in the songs of peace. The farmer's frock and the mechanic's apron are more honorable badges than the warrior's tinselled livery, and the horse is a more respectable animal, tugging at the cart or the plow, than in saying, "ha, ha! among the trumpets."

Thirty-seven years of continued peace have done more for the useful arts, and the general welfare of the world, than all the patronage of conquerors, in the rarely lucid intervals of their madness, through all past time. War breeds war, not only in perpetuating national hatred, but in creating a tiger-taste for blood, and a love for the vagabond, lawless, and exciting life of the soldier, disqualifying for useful purposes. The pride of military glory is a country's curse, wasting her energies, and demoralising her people. But a long period of peace brings out a better ambition, and a more civilized rivalry. Deeds of arms become matters of anecdote and story, and are heard with lessening interest as the old actors drop off the stage. New views of duty are generated, and activity is turned to productive labor, and the promotion of human happiness.

REFORMATION AND BENEVOLENCE.

There is a vital energy, which must find occupation, and, in these "piping times of peace," an abundant portion is claimed by reformation and benevolence. There are those among us who speak the wrongs they feel, and do not stop to weigh and measure out indignation. And there are those who are found wherever there is sin and suffering, whose daily life is passed where vice may be reclaimed or poverty succored, where guilt awaits its doom, or, having completed its years of silent penalty, re-enters the company of men to be shunned and driven back on crime, unless some kindly word or deed of encouragement may make it feel that there are those who can forgive even as they hope to be forgiven. And there is help for the orphan who needs a home; and charity, in every form that can minister to disease of mind or body, spreads its kind care over error or misfortune.

THE ENTERPRISING, WORKING YANKEE.

Industry has never had such an unimpeded progress as in this country. Free from the military exactions of Europe, where standing armies drain the land of its best blood, and the liability to compelled service disheartens the exertions of the laborer, we are left to our own resources, without interference or encumbrance. However little reason we have to boast of the advance made in those portions, where local causes keep down improvement, and show no change, save exhausted fertility, and the return of the wild deer to the worn-out and abandoned plantation, we can present our New-England as an evidence of what may be accomplished by diligence, when allied with determined perseverance and temperate habits. The stern necessity which brought the fathers, has made the children what they are; and the resolute, dogmatic, conscientious, rigid Puritan, has produced the pains-taking, money-making, enterprising, working Yankee. He is an original for-

mation. History has offered nothing like him, and you may go the wide world over, ransacking all nations, without encountering his parallel. Circumstances have created him, and although they operate on the newly landed immigrant, astonishing him, in time, with the fact, that his head can think of two things, and his hands do a dozen, they can never mould him into the think of every thing, natural growth of the soil. The real native turns his hand to any thing, lays the foundations of a city with an axe and a jackknife, unites all trades in his own person, whenever it is most convenient to do so, it being a matter of unconcern to him whether he shoes himself or his ox, builds a house for his family or a sty for his pigs, holds a plough or tends a spinning jenny, goes a lumbering or to the Legislature, opens tavern or keeps school. He is farmer, trader, carpenter, mason, shoemaker, blacksmith, and legislator; and is ready to give instruction in either, including most other branches of human knowledge. If he wants an article, he makes it, and if the right thing has never been made before, he invents it for the occasion, never dreaming that he is doing what is not, of course, done by all other men. He longs for foreign travel, concludes to see the world, and indulges in the episode of a four years whaling voyage; hears of California, and, in a few months, is whittling on the banks of the Sacramento, finding it more profitable to let others dig, and trade for the proceeds. He is slow to wrath, and can endure much, when it is against his interest to show fight. The thing is, however, in him, as may be ascertained, by painful experience, by pressing him beyond his bearings. He has a reverence for wealth, and a decided inclination to convey as much of it as possible into his own keeping; thinks well of education, and has great respect for learning, when it does not cost too much, but grumbles if it increases the tax bill, and is apt, for the time, to manifest, like the spiritual rappers, a ghostly indifference for such minor matters as orthography and syntax. He has great economy of time, grudges the last hours given to sleep and food, takes the fastest boat, the chances of blowing up being quite a secondary consideration to that of landing a few minutes earlier; wonders why the train goes so slowly, when it is tearing along its thirty miles an hour, and rises from his seat the moment its speed slackens, fearing that somebody may, somehow or other, have an advantage over him by getting out first. He has a natural inborn courtesy to woman, gives up his comfortable seat in coach or car without a murmur, considers that she has, indisputably, the best right to the best things, and has more real gallantry than existed in all the cutthroat days of chivalry.

There, if any can do better than that, we have never seen it. It is a perfect portrait.

ONIONS.

Mr. Benjamin Clifford, of Norwich, has succeeded in protecting this valuable root from the ravages of the insect which has for years almost entirely destroyed the onion crop in this vicinity.—We visited Mr. C.'s garden a few days since, and observed two beds of onions side by side, and about two feet apart, one filled with fine large red onions, perfectly sound, while the other had but a

few scattered stalks with scullion bottoms, rotten and full of maggots. On inquiring, we found that the full grown onions had been sprinkled with *tar water*. An equal quantity of hot water and tar were stirred together, and after standing a few hours, the fluid part was sprinkled upon the onions on one of the beds. This application was made in June, when the young plants were first attacked by the fly, and the process repeated about two weeks afterwards. The result was a fine crop upon that bed, while upon the other, not a single onion was raised.—*White River Advertiser*.

For the New England Farmer.

FREAK OF NATURE.

MR. BROWN:—Dear Sir,—We send you by bearer two apples, one a Baldwin as you will see, the other a Russet. They were raised by Mr. ROGERS, of Watertown, who found when picking his apples two kinds as appeared to him, and as it really proves, on one limb. It being a small limb, he cut it off, to show to his friends; we saw this limb, and from it he picked four Russets such as we send you, also three Baldwins, one of which we send you; this limb, the end that was cut off, was some fifteen feet from the trunk of the tree, and as the Russets and Baldwins grew upon the same small limb, there is no way to account for it but by saying it was a freak of nature, and a strange one too. You will notice that the Russet is marked somewhat with the red color of the Baldwin, though in other respects it does not differ from common Russets. On the side of the tree on which these apples grew, stands a Russet tree the limbs of which are intermingled with the Baldwin.

The above are facts, *though not written for publication*.

Yours respectfully,

JAMES HYDE & SON.

Newton Centre, Oct. 30, 1852.

REMARKS.—We are much obliged to the Messrs. HYDE for kind attentions. The apples are preserved for the inspection of the curious. To our eye, there is not a very strong russet resemblance in the apple that approaches that variety. There is a greenish tint pervading it that is never, we think, seen in the true russet. But from some cause there is a remarkable departure from the Baldwin in one of the specimens; but similar changes are not unfrequent.

For the New England Farmer.

THE HUSBANDMAN.

MR. EDITOR:—In my readings I lately came across the description, as below, of the happy life of a husbandman. It is from Deare's translation of the Georgics of Virgil. It was so pleasing a picture, I transcribed it for my own gratification. Perhaps it may do something towards convincing the farmers of New England of the bliss which they enjoy compared with other employments and professions. I noticed in the *Christian Register* of to-day, in a piece written by a clergyman from "*Peaceville*," the following pleasant thoughts:

"I always feel a peculiar interest in the conversation of an intelligent tiller of the soil; and when I hear him speak of his various processes of cul-

ture and of the different products of his trees and fields, I have sometimes thought that there was a deep instinct of my heart which drew me to these objects, as the natural interests and employments of man. And who knows but such an instinct is common to us all, giving to our thought and labor an inborn direction, which all education and habit cannot quite overcome, and which pleads with so many of all callings and professions to go back to man's primitive employment, the tilling of the soil?"

Very many of the same sentiments were expressed by Rev. Mr. HUNTINGTON, in his speech at the Norfolk County Agricultural Society's dinner-table, a few days since. He spoke of the course of an upright, intelligent farmer, as being a constant sermon to the minister. We are glad to see the effect the preaching and practice of the *New England Farmer* is having on the ministers. It will do them good.

W. R. D.

THE HUSBANDMAN.

Ah! but too happy, if they knew their bliss,
The husbandmen; for whom the righteous earth,
Far from discordant arms, pours forth her stores
Of ready sustenance. What if for them
No lofty mansion from its ample porch
Vomit each morn a sycophantic tide;
What, if no decorated columns move
The admiring crowd; no brodered gold disguise
Their simple vests, nor Grecian vase for them
Project its graceful form; no Tyrian dye
Their spotless wool, nor vitating use
Of Eastern perfume taint their wholesome oil?
Yet rest secure, and life that ne'er deceives;
Rich in various wealth of wide domains;
Caves and the living lake; yet cooling vales
And lowing herds and shaded slumbers sweet
Are thine. For them the woodland glade expands;
There are the pleasures of the chase, a youth
Of labor patient, and of frugal fare;
Theirs the pure altar; theirs old age revered:
Leaving 'mongst them her vestiges extreme
Departing Justice fled the haunts of men.

For the New England Farmer.

MISMANAGEMENT WITH APPLE TREES.

MR. EDITOR:—I send you some of my views respecting the improper management of apple trees, which if you should think might be conducive to the benefit of mankind, you will please to insert in your valuable paper. I shall commence the subject in an abrupt style, by saying, if a coroner's inquest were held over four-fifths of the apple trees that have died in Vermont and Northern New York within the past twenty years, the verdict would be, *died of starvation*. There is scarcely a person who has followed husbandry ten years, that does not know that it will not answer to take off more than five or six crops of grain in succession from a piece of land without manure; but the same man takes off from ten to fifteen crops of apples from his orchard without adding manure; and when the crops begin to grow light, the fruit small and of inferior quality, he begins to inquire for the cause of such light crops. He asks his neighbor what is the matter with his orchard. (Pretends to be very wise himself, but likes to get the opinion of his neighbors.) His neighbor tells him it needs pruning, and he soon prepares for the business. He is very much afraid of cost, and there-

fore tries to find a man that will do it cheap. (Most farmers, if they are obliged to have a leg or an arm cut off, employ the most skillful surgeons who perform the operation with the sharpest and finest of instruments, but the same men generally employ the cheapest bunglers they can find to cut off the limbs of their apple trees.) He soon finds a cheap bungler; and to make it come cheaper, he hires him by the job, and gives him all the branches to pay for the labor. This induces him to cut off twice as much as he otherwise would have done. (I wish to have it borne in mind, that every branch above, has its corresponding root below, and when a large branch is cut off, its root is more or less paralyzed, and a derangement in the circulation takes place, similar to that occasioned in the human body by cutting off a leg or arm.) He now commences the work of death upon the orchard with an old dull axe, and cuts or haggles off one-half of the branches. The next year the apples being much larger, Mr. Unthrifty thinks he has accomplished the great object. The reason why the apples are larger is, the few branches receive the same nutriment that the many received before. The branches being improperly cut off, the stocks do not heal over, but soon die, rot, and form holes into the trees; these holes let in the water, which soon destroys the inside of the trunk. This, together with the great derangement in the circulation, occasioned by cutting off too many large branches, and want of food, act so powerfully upon the vitality of the trees, that after vainly struggling for a few years, they give up the ghost and die; and who blames them! surely no man of understanding can.

The husbandman now finds his plans frustrated, and again inquires of his neighbor what has caused the death of his orchard. (His neighbor don't know enough to tell him that starvation was the principal cause.) He tells him that the climate does not agree with old apple trees in this latitude at the present day, and the only thing he can do, is to set out a young orchard. He says to himself, this will be of no use to me, for I am now sixty years of age, but as I have children who are fond of good fruit, I will set out a few to gratify them. The first step he takes is to find where he can obtain the trees cheapest, without any regard to the manner in which they have been trained. (One tree properly trained, and properly set, produces more clear profit the first twenty years, than ten set otherwise.) As he is a man who deals mostly in cheap articles, he employs a man to furnish the trees and set them by the job. (This is the worst kind of jobbing I ever heard of.) This he does for eighteen cents apiece. It is generally the case that people who work by the job, try to make as good a job as possible. He is therefore very careful not to dig the holes too large. He digs them about as large as a peck measure; into these small cavities, surrounded by a very hard soil, he crams in the roots of the trees, and if he cannot get them all into the hole, he cuts off a part of them with his shovel. (Whenever the roots of trees are cut off, it should be done with a very sharp instrument.) He then throws back the sods and lumps around the trees and pronounces them set in first rate order. He then receives his pay and is off in a hurry. Mr. Unthrifty soon expects to see a thrifty young orchard, but is very much disappointed. The trees being improperly

trained while in the nursery, and improperly set in the orchard, one-third of them die the first season. The remainder being sickly, languish three or four years, during which time one-half of them die. Of all the trees thus set, not more than one in ten is ever profitable. About this time Mr. Unthrifty dies, leaving his unthrifty orchard for his unthrifty children, who are very thankful for the pains he has taken for them, at the same time thinking him to be nearly as wise as any man in the union. This is the way many men manage with their orchards, who boast of being enlightened, and who are living in these free and enlightened States of North America. I should like to say something on the subject of irrigation, which I perceive is very imperfectly understood in this part of the country; but shall defer it till a future period, well knowing that the minds of men are much like their stomachs:

If cram'd too full, they throw out the whole;
But if fed by degrees, they digest all with ease.

ELIHU CROSS.

Potter Hill, Rens. Co., N. Y.

CONCORD FARMERS' CLUB.

OCTOBER 25, 1852.

SUBJECT,—*The Corn Crop in New England.*

Mr. JOSEPH D. BROWN said he once thought the corn crop an unprofitable one to raise, but upon adopting a different practice in the modes of cultivation, his views had changed. He believed that in his earlier practices he had not managed the crop properly. By manuring altogether in the hill he used to get a great deal of stalk and but little corn; he then spread the manure entirely, and under this practice found the stalk too slender. Last year he spread the manure as usual, plowed the ground twice, pulverized finely, and just before dropping the corn added a table spoonful of guano to the hill, sometimes mingled with meadow mud, and in another case, pure guano, spreading it about the hill before dropping the kernels; hoed the corn three times, and has harvested a fine crop of sound grain equal to 1200 bushels of ears upon 22 acres, making an average of about 52 bushels to the acre. On four acres in the centre of the field there was estimated to be 80 bushels to the acre. The average weight, husked and weighed on the ground where it grew, was 45 lbs. to the square rod, on the four acres of the heaviest.—He used 25 ox loads of good composted manure to the acre, worth \$1 a load. He thought forty bushels per acre a fair average crop, viz:

50 bushels corn per acre, at 75 cts.....	37,50
stover, per acre.....	10,00
	\$47,50
Cost of cultivation per acre.....	10,00
25 loads manure.....	25,00
133 lbs guano.....	3,33
	\$38,33

Leaving for profit.....\$9,27

Saying nothing of the interest of the land, he found a clear profit of \$9,27 an acre, and each acre in a condition to produce a heavy crop of grass, sufficient as an average, perhaps, to give

two tons of hay to the acre, for four years, without manure, and for six or eight years with an annual top dressing of good compost.

Mr. ELIJAH WOOD, Jr., said he had been satisfied for ten years past that the corn crop is a profitable one. He could do all the necessary work for this crop for \$13,50 per acre; usually puts on 25 cart-loads of manure, and gets about 40 bushels of sound corn to the acre. He thought the stover worth as much as the labor costs. It is a good crop for our dry and hot summers. He would not advise to put the crop on moist land; other crops may be made more profitable there. He said we could raise this crop as favorably as can farmers at the West; their crops fail after two or three years planting without manure, and they are then obliged to have recourse to methods similar to ours in order to re-invigorate the soil. In passing through the State of Ohio the past summer, he saw few fields which he thought would average over 25 bushels to the acre. In cultivating, he keeps the land level and sows grass seed at the last hoeing—thinks this process cheaper and better than plowing and seeding or sowing grass seed with grain in the spring. Would recommend plowing heavy land intended for corn in the fall; but light sward land, if only the day before planting the better.

Mr. J. WARREN BROWN said that the gentlemen who had preceded him in this discussion had reported so much more favorably than he could, that it was hardly worth while for him to speak; but as experiments are not always the most valuable because they are successful, he would briefly state his operations and their results. He had plowed a few acres of poor land, so poor that the grass got from it for several years past was only sufficient to pay for the cutting and making. This he had planted with corn, adding a spoonful of guano mingled with finely pulverized meadow mud, ashes and plaster to the hill, and with this treatment had gathered 21 bushels sound corn to the acre. He thought the stover would pay all expense of cultivation. This was done as an experiment. In his other corn crops where he manured with 25 ox loads to the acre, he could get as an average from 40 to 50 bushels of good corn from the same amount of land. Several years ago he gave up cultivating corn from the belief that it was an unprofitable crop; but he had seen conclusive evidence that he was wrong, and now believed that it is one of our most profitable crops.

Dea. ABIEL WHEELER said the corn crop was particularly liable to be injured by cut worms. Fields in his section had suffered considerably for many years. He had hoped some remedy would be suggested for this evil.

Subject for next meeting, Monday evening, Nov. 1, "Are there advantages in cutting fodder for stock?" Leaders—JOEL WHEELER—JOSEPH REYNOLDS—ABIEL WHEELER, and JOSEPH HOMER.

For the New England Farmer.

MY GARDEN.

OR, SMALL NOTES FROM A SMALL BANK.

1. *Extent and Aspect.*—It measures by my paces about seven rods east and west, and three rods north and south, containing twenty-one square rods. It slopes to the south, converging on the south line from the west, so as to form a hollow extending into my neighbor's premises. This hill-side takes the full strength of the sun, and rains wash down the soil, and till I built a high wall on the south line, its finest and best portion ran away to my neighbor. Two grass terraces, not yet sufficiently raised, have arrested a portion of my fugitive ground. Would not perpendicular terraces of stone, be preferable, by giving me more space to cultivate, and affording a less tempting resort for mice, which destroyed my raspberry bushes, under last winter's snows? (a.) So I judge, though a grass bank suits the eye better, while, alas, it constantly claims the right of annexing the adjacent territory, much to my annoyance.

2. *Its Soil.*—It consists, in its natural state, of pebble stones, from over 100 lbs. weight, to an ounce, and I cannot say how much less. In the twelve years I have cultivated it, probably enough has been removed to build a sufficiently high adobe wall to secure it on two or three sides. The supply is still ample, though my hoe rings less against them than when I began to batter it. The *ox-stone raker*, (b) to exhume and gather them, has not come to hand yet. The crow-bar strikes firm bottom too soon, often when I try my power of penetration, in setting bean poles. Yet my soil has a good constitution, with appliances to develop its fundamental principles, commingled with the auxiliary forces of clay, loam, muck, &c., provided, always, it is made contented to remain with its owner.

3. *Its insects that war upon it.*—The cutworm, the cornstalk and potato-vine borer, the yellow striped bug, and his slugs, and the whitish thousand legged racer, that can run backward and forward equally well, perhaps, and that eats off strawberry roots, and the squash bug, also, are all fond of the repasts they find in my garden. No law of extermination, yet known, can reach them. My squashes I save, by inspecting the leaves often, especially the under side, killing the parent bugs, and scraping off their eggs. The borers of fruit trees I fight with knife and wire, for ashes, soap, &c., have disappointed me. With common soap, I exorcised the bark of my finest peach tree, and it died in consequence. Gave too large a dose, doubtless. The insects found on the branches of my fruit trees, are, first, a small brown worm, coiling single leaves of apple trees around him, eating off the blows, and cutting off the stems of the germs; second, the curculio, that speedily follows, diligently depositing his ovum in the young apples, plums, and cherries, working sure death, or a stunted growth, with his sharp gouge. Third, the codling miller, making the blow end of apples his place of deposit for his offspring. This rear-guard of the invaders, scarcely an apple escapes, left by them to struggle for life. The bag-caterpillar I destroyed by crushing, when within reach, or burning if not. I assailed curculios with the syringe, and lime water, soap-suds, and tobacco tea; but I was too late, as the enemy was entrenched. My apples I nearly lost, but cherries escaped, and plums and my...

4th. *Experiments.*—Placed four or five inches of white sand below the seed potatoes, in one row, with no marked result. Ashes unleached in the hill, I found of no service, but prejudicial. Charcoal dust used in the hill had no striking effect. Having feared stable manure, and besides, finding none to buy, I spread on one plat, before plowing, a supply of decayed forest leaves, and the surface sod, and there the potatoes grew large and sound; and in a drilled row, planted a foot apart, one tuber in a place, the whole bedded well with decayed leaves, beneath and between the whole the product was evidently increased much, and the tubers were many of them unusually large, and all of them of a healthy appearance. (c.) They were the long curved blues, called in Vermont, cow-horns, a fine potato, ripening rather early. They evidently are a very productive kind.

5th. The weeds of my garden, piled from time to time, with grass of my terraces and small yard, and droppings and scrapings from the street, receiving night soil and soap-suds of the wash, turfs also being added, afford much aid, as to compost manure.

Please accept this small instalment from your obliged friend.

J. LEE.

Salisbury Centre, Conn., Oct. 10th, 1852.

REMARKS.—Please accept our hearty thanks, friend LEE, for the picture of your garden, and for the experiments and observations you have made therein.

(a.) Would not a perpendicular wall where the grass terraces now are, afford you a fine opportunity for the espalier training of grapes, peaches and dwarf pears, be equally as pleasing to the eye and yield you a handsome profit? We lately saw a row of pear trees trained to a lattice fence in the garden of Mr. JOHN GORDON, of Brighton, nearly all of them yielding delicious fruit, and on one of which, we counted *one hundred and one*, large and very handsome pears, we think of the Duchesse D'Angouleme variety.

(b.) But the *stone picker* has been invented, is in use in England, and we believe has been introduced into this country.

(c.) Mr. Lee's experiment with the potatoes is well worthy of notice. When the crop has suffered the most by rot, we have rarely known it affected on *new, dry* land. What virtue is there in new land, which the potato requires, that is so soon exhausted by plowing and cropping?

CATTLE SHOW AT NORTHAMPTON.

The annual exhibition of the Hampshire, Hampden and Franklin Agricultural Society occurred at Northampton, on Wednesday and Thursday, Oct. 6 and 7. The multiplicity of these festivals, instead of satisfying the public mind, and growing yearly less and less interesting, are becoming annually more enthusiastic, better attended, and each exhibits, in some respects, marked improvements over its predecessors. A spirit of honorable emulation has been awakened and the beneficial results are everywhere apparent. There is a better adaptation of country better adapted to the growth of

such institutions than the fertile valley of the Connecticut. It is among the enlightened farmers of this region that their benefits are appreciated and sought, and it is among them that these advantages will be improved to the utmost. Every year witnesses the formation of new societies, and it may not be many years before every town will have its own Cattle Show, and agriculture advance with rapid strides.

The exhibition of *Stock*, took place on the common near the cemetery, on the morning of Wednesday. The show was not equal to that of previous years. The variety was less but the quality was good.

There were 11 entries of Working Oxen, and among them a pair belonging to Mr. EDMUND SMITH, of South Hadley, attracted much attention. Of Steers there were 9 entries. Of Bulls 6, many of them noble animals. We noticed in particular, that of Mr. DEXTER ALLIS, of Hatfield. The entries of Milch Cows numbered 6; among them was a fine cow, weighing 1640 lbs., owned by Mr. MOSES BRACK, of Northampton, from which 10 lbs. of butter per week was about the common average, on nothing but hay feed. Swine were fully represented, and many fine specimens were presented. The number of entries was 10.

For the plowing match 22 teams were entered, and the contest was most spirited. The whole number of entries of Domestic Goods was 151; Garden Vegetables 60; Fruit 532; Mechanic Arts 50; Fancy Articles 70; Bread 71; Butter and Cheese 27; Fowls 54; Sheep 4.

The exhibition of Horses did credit to the Society, and made ample amends for what might have been lacking in the Stock department. There were a large number of entries, and many fine animals were presented for premiums.

The address, by Mr. GOULD, of Hudson, N. Y., was a practical, sound, thorough mingling of science with the most common employment of the farm. It was highly scientific, yet at the same time so practical in its bearing, as to be understood by every person present, and even though the terms were forgotten, the practical deductions from their use were so stated as to be understood and remembered for future practice. His subject was "the germination and growth of Indian Corn."

At the dinner-table, speeches were made by Secretary GORHAM, who spoke in an eloquent manner of the need of scientific agriculture, and closed with the following sentiment, which called out His Excellency, Gov. Boutwell.

"Ever first in our hearts—the Commonwealth of Massachusetts—represented to-day by her Gov., GEO. S. BOUTWELL."

The Governor spoke of the wants of a ture, of societies for its promotion, and suggested that our local societies should be increased till each town had its own, and these should form the basis of the County societies. Nothing should be exhibited at the Co. Societies, except what had taken premiums at the local societies. The competition should be between the town associations, who should report to the parent or county society. He mentioned also the establishment of the Board of Agriculture, as calculated to accomplish great good, and spoke in an eloquent and impressive manner.

HON. EDWARD EVERETT followed in a most touching, eloquent, and finished speech, of which a mere

abstract, such alone as we should be able to give, would by no means do justice. He alluded most beautifully to the season of the year, and the fine scenery by which we were surrounded. His ride in the morning through the meadows, was described only as Edward Everett could do it. He alluded to several important requisitions needed to improve our farming, as well as the means by which it had already become so universally developed. He alluded in most glowing terms to the connection of Manufactures and Agriculture, and prophesied of the rapid growth of the new manufacturing city of Holyoke,—that ere the young generation now coming on became wrinkled by age, a population of 50,000 would be gathered there. The whole address, so eloquent, so beautiful, so chaste, chained, enraptured and charmed the audience, who received it with frequent bursts of applause. At its close, the Secretary offered a sentiment complimentary to Lieut. Gov. Cushman, who was speaking when we left.—*Amherst Express*.

For the New England Farmer.

EXPLANATION.

MR. EDITOR:—Dear Sir,—Devoting my life to the advancement of the farming interest by every honorable means, I am unwilling to stand in the wrong before your readers, as I am placed by your correspondent in giving an account of the Fair and Cattle Show of the Berkshire Agricultural Society. He says:—

"I forgot to mention that the society were very much disappointed in the *scientific report* that they had expected from Dr. Lee, of Washington, by his failure to appear. Here let me say, that those societies which are content with the *first cut only, from abroad*, made a great mistake. The *Address* should be a part of the *County Show*, as much as any other part of the exhibition, and those societies act wisely, who limit their appointments to citizens of their own county. In so doing they encourage their own citizens to qualify themselves to make good addresses. I have heard as good agricultural addresses from veteran hard-handed farmers, as I ever heard from any college-learned gentleman. I have more confidence in their instruction. I would not undervalue *gentleman farmers*, but I confidently say, no man can thoroughly understand and teach the business of cultivating the soil, who does not engage practically in it with his own hands."

The "disappointment" above referred to, arose from the fact that the invitation to address the society was verbal, and the understanding on my part that a written notice of the time of holding the Fair was to be sent to me. The worthy President of the society had a different impression, did not write, and the time of the Exhibition passed by without my knowing that I had, seemingly, failed to meet my engagement.

Having made a personal explanation, allow me to add a few words of comment on the pointed suggestions contained in the paragraph above quoted, which imply that some farmers are "gentlemen," and that some are not, as a class. Antagonism of this character, between cultivators of the soil, should not exist; and the spirit that cherishes it is alike unhappy, unjust, and unwise. To give to agricultural improvement a divided support, is not enough; it pre-eminently deserves the cordial and

earnest co-operation of every one who is willing to labor in its behalf. Such an union of effort can never be realized, nor the good that extensive and perfect co-operation can alone secure, if the friends of the farming interest divide themselves into two or more parties. So far from undervaluing daily experience in tillage and husbandry, or holding out a promise that the Berkshire county farmers should have "a scientific report" from me, I was engaged, when invited to address them, in cultivating with my own hands, (albeit not unused to such employment) my farm of 109 acres in the District of Columbia. For thirty years I have steadily contended that field culture and mental culture ought to be more closely associated, and warmly cherished together, than they now are; and to elevate equally both the science and practice of agriculture in all the States. I will not conceal my anxiety to see Massachusetts found an agricultural institution, for the education of her sons, in a way that shall make them at once the best farmers and the wisest statesmen. Judging from what has been seen at the federal metropolis during the last three or four years, American statesmanship is even more defective than American agriculture. The much-needed remedy is in the hands of the people, a large majority of whom are farmers. American statesmanship is a thing of their making; and if some of it does not require a second summer fallowing to kill the weeds and improve the harvest, I am no judge as to what kind of statesmen a nation of upright, intelligent farmers ought to produce. The men who follow the plow are not to be benefited by flattery. As sovereign rulers of this republic, they hear far more of their rights than of their duties. It is the unseen neglect of the latter that blights the character of Congress. Who more than stock-growers breed demagogues, and breed them downwards?

Of all things, our country most needs wise agricultural statesmen. How are they to be called into existence? Not from a lawyer's office; not from a doctor's office; not by trusting again advantages and appliances which have been too long tried, and found wanting.

Yours, truly, DANIEL LEE.

Rochester, N. Y., Oct. 25, 1852.

REMARKS.—We agree with the writer of the second paragraph above, "that no man can thoroughly understand and teach the business of cultivating the soil, who does not [or has not, Ed.] engaged practically in it with his own hands."—The story of the heiress whose husband desired her to have some brown bread baked, illustrates his position. She directed the cook to prepare the bread. How much of each kind of meal shall I use, madam! About *three pecks*, was the reply. So the gentleman and his lady had *six pecks* of rye and Indian for their breakfast! She had plenty of cook books, undoubtedly, but never knew practical experience. A man may be a practical farmer who never mows or holds the plow, but he cannot be a *thorough teacher of farmers* unless, at some time, he has had large personal experiences in all the details of the farm. He cannot state facts with confidence and force, because they are

not the results of his own acts or observation, but the declaration of others.

Dr. LEE is not only a practical farmer, but one of the most intelligent and energetic among us. He clearly sees the wants of this great industrial class, and knows how to meet them. As editor of the *Genesee Farmer*, he is exerting an important influence in the land, while he is scarcely doing less by his active personal efforts.

Our correspondent "P." is one of New England's well-known and honored sons, generous and high-minded, and we are confident would not indulge in any criticism which he thought unjust or unfair.

For the New England Farmer.

THINGS UNSEASONABLE OR WRONG.

MR. EDITOR:—"Hints" are not often welcome to editors, unless administered in the form of "mint drops;" yet I will offer a few for your consideration.

Your useful and interesting paper contains many facts and suggestions for practical use, but not always applicable to the present time. Peradventure, in January, we shall see "How to raise early cucumbers,"—"When to cut wheat,"—"To make ice cream," &c., or in July, it may be, "The best method of preserving winter apples,"—"A model Ice-house,"—or "How to restore frozen potatoes," &c.,—and we rejoice in the possession of such information, which we are firmly intending at the proper time to use. But when that time arrives, a thousand other excellent articles have driven those useful suggestions from our mind, or so confused our memory, that we cannot recollect them with sufficient accuracy, nor refer to the paper in which each is to be found. Consequently much of the desired benefit is lost.

What I propose is, that each number have its proper index, perhaps at the top of the first column, for convenient reference, so that to refer to any desired article at a future time, it may not be necessary to "rummage" through the whole paper. At the end of the year, the matter for each index, if not distributed, would be ready to be collected into one. If I have not tried your patience by such a long "hint" to begin with, I would suggest another, viz.:—that care be taken, in copying from other papers, to take nothing of an irreverent or profane character. In your number for last week, a *witty and profane* Irishman uses the term "By Jabers"—plainly, "By Jesus."—Such an expression I am not willing that any in my family should see, especially through my instrumentality. This expression is not the first of the kind in your paper, nor are such instances wanting in professedly religious papers; but I must charge it to inadvertence, though this makes it none the less an evil.

The more common practice in respectable papers, of quoting a passage of Scripture to give a "point to wit," I may be charged with "puritanism" in condemning, though indeed it does cause me pain, and seems to me wrong in the sight of God.

Having "broken the ice," and found all the fault necessary,—(for indeed I heartily place your paper as high as the highest in excellence among

those for which I subscribe,)—if agreeable, you may hear again on more pleasant topics, from

Your humble servant, **UNCLE JOHN.**
New Englandville, Oct. 20, 1852.

REMARKS.—"Uncle John" has our sincere thanks for his hints. They are evidence that he finds interest in the paper; we assure him that we can find a *cash value* in them. Convenient to our elbow, we have a draw labeled with the names of the months, into which we place such communications as appear to us unseasonable, with the intention of publishing at a time when they would have more direct application, and consequently more force. But not appearing as soon as expected by their authors, some imagine that they have been rejected, others, that the editor is careless or indifferent, while a third takes the trouble to write and ask why his communication does not appear? These writers have been experimenting or thinking intently, perhaps, upon the subject which they discuss and are desirous of giving the world the benefit of their results while fresh upon the mind, and in this way matters are sometimes introduced which cannot be practically acted upon at the time. Does "Uncle John" see our monthly issue? In that he will find an index to each number; and in the bound volumes a copious index, alliterated, and arranged with care.

Your suggestions upon the moral aspect of the paper are just, and shall be properly considered. We shall be happy to hear from you, as suggested.

THE RIND OF FRUIT INDIGESTIBLE.

This fact cannot be too strongly impressed upon the public. It applies to all fruit, without exception, and includes also, the pellicle or skin of kernels and nuts of all kinds. The edible part of fruit is particularly delicate, and liable to rapid decomposition if exposed to the atmosphere; it is, therefore, a provision of nature to place a strong and impervious coating over it, as a protection against accident, and to prevent insect enemies from destroying the seed within. The skin of all the plum tribe is wonderfully strong, compared with its substance, and resists the action of water and many solvents in a remarkable manner. If not thoroughly masticated before taken into the stomach, the rind of plums is rarely, if ever, dissolved by the gastric juice. In some cases, pieces of it adhere to the coats of the stomach, the same as wet paper clings to the bodies, causing sickness and other inconvenience. Dried raisins and currants are particularly included in these remarks, showing the best reasons for placing the fruit upon the chopping board with the suet in making a pudding of them, for if a dried currant passes into the stomach whole, it is never digested at all. When horses eat oats or beans that have not been through a crushing mill, much of this food is swallowed whole, and in this state, being perfectly indigestible, the husk or pellicle resisting the advents of the stomach, there is so much loss to nutrition. Birds, being destitute of teeth, are provided with the apparatus for grinding their seed, namely, with the gizzard,

through which the seed passes, and is crushed prior to digestion. The peels of apples and pears should always be cast away. Oranges we need not mention, as this is always done. Orleans, greengages, damsons, and all plums, should be carefully skinned if eaten raw, and if put into tarts, they should be crushed before cooking. Nuts are as indigestible as we could desire, if the brown skin be not removed or blanched, as almonds are generally treated.

For the New England Farmer.

IMPROVEMENT OF OLD PASTURES.

BY FREDERICK HOLBROOK.

MY FRIEND, MR. BROWN:—I have read Mr. French's very interesting and valuable article upon the renovation of old pastures, published in the weekly *Farmer*, bearing date Sept. 25th. He states the causes of the deterioration of pastures so perspicuously, that any farmer may comprehend them. His article is particularly valuable and timely to those whose pastures, tired of producing the cultivated grasses, now only yield a poor herbage, so deficient in the elements of nutrition necessary for the healthy support of milch cows as to expose them to attack by the "bone disorder." I am persuaded that this disease is more and more widely developing itself in the older settled districts of New England; and observation convinces me that a great majority of those farmers whose milch cows begin to show symptoms of the disease, are utterly in the fog as to the causes and a remedy. Would that all such might read and ponder this article, and be practically influenced by it; they would no longer be in doubt as to the origin of the disorder, and would find the remedy prescribed effectual. In common with my friend, Mr. French, I feel a great interest in the improvement of old pastures; and with your permission, and in the hope of aiding him somewhat in his laudable effort to promote improvement in this "much neglected department of farming," I will now state some modes of restoring fertility to such lands, known to me, by practice or observation, to be profitable and efficient.

And first, I feel bound to speak well of green crops, plowed in, for the improvement of poor pastures. Green crops containing in their substance not only all they have drawn from the soil, but also a great part of what they have taken from the atmosphere, when plowed in, necessarily add more to the soil than they take from it. I have found that successive green crops, plowed in, refresh and invigorate an old pasture very much. I will cite a case:

A field of four acres, a thin yellow loam, before coming under my management had been exhausted by successive crops of rye, and left to itself, had in time acquired a thin herbage, which in the spring tried to look green, but in early summer became brown and dry, and for the remainder of the season was valueless. The field being situated upon a high hill, distant from home, and difficult of access with the manure-cart, I was for two or three years in doubt as to what means I could profitably adopt to enrich it. After revolving various plans, I finally determined to test the fertilizing power of green crops, plowed in. My object being two-fold, to test the merits of such manuring, as well as to enrich my land, I concluded

to harvest the first and last crop sowed, and thus obtain a demonstration of the natural productiveness of the soil and of the increase by reason of the crops plowed in. Otherwise, I should not have required a grain-crop from the poor old field at all.

In the month of June, when the little herbage the land bore was at its greatest height, it was turned under, and three pecks of buckwheat were sown to the acre and harrowed in. The crop was harvested in the autumn, yielding eight bushels of grain per acre. In May following, the land was again plowed, one bushel of buckwheat was sown on each acre, and harrowed in. As soon as the crop blossomed, it was plowed in. A heavy chain, attached to the plow-beam, immediately forward of the standard of the mould-board, and to the off-end of the eveners, lopped the stalks down so that they were pretty well covered up. The field was then rolled; the same quantity of buckwheat was again sowed; in September, the crop blossomed and was plowed in, the land was then rolled, and sowed with one and a-half bushels of winter rye to the acre. In June following, the rye had made a remarkably thick, luxuriant growth, and was plowed in; the land was then rolled, sowed with one bushel of buckwheat, together with six pounds of red clover, a peck of herds-grass, and two pecks of red-top seeds to each acre, and harrowed and rolled. The buckwheat was harvested, and yielded eighteen bushels of grain to the acre,—being an increase of more than one hundred per cent. over the first crop. At the time of sowing the grass seed, the soil had been brought to a fine mellow tilth, so that they germinated well; the following season being sufficiently moist, the young grass came on well; and the field became covered with a valuable sward, which it has ever since maintained—now some ten years. Any half acre of the land has been worth more, as pasture, than the four acres were previous to the manuring. I ought further to state, that in skinning the land with rye, the plowing had been about four inches deep; and that in the course of turning in the green crops, the plow was gradually introduced into the sub-soil, until at last three inches in depth were mingled with the four inches of top-soil, and with the vegetable manure plowed in. The expense of the three crops turned in, and of the grass-seed and getting it in, was ten dollars and twenty cents per acre, reckoning labor and materials at the prices they were then going at.

The late Judge Hayes, of South Berwick, Me., was a pioneer in the improvement of worn-out land. His pastures were not so hilly and stony as to prevent plowing, though they were more or less rolling of surface. For twenty-five years, he had been in the practice of plowing them once in six or seven years, turning the sod at convenient times after haying, then harrowing and sowing herds-grass and red-top seeds, with winter rye, and red and white clover seeds on a late snow the following spring. The rye was fed off by the cattle while the young grass was coming on to cover the land. The mosses, small bushes, ferns, sour grasses, and droppings of the cattle being placed beneath, and a fresh surface brought up; and the gradually decaying sod keeping the soil mellow, as well as furnishing support to the new seeding; the quality and quantity of the feed gradually improved. On spots where wild plants and sour herbage originally flourished, the cultivated grasses

were brought in. In this way most of the pasture-fields had been gone over three or four times during the life-time of my late friend; and he confidently recommended such practice to others, as worthy of invitation.

Pasture-fields that are pretty smooth, not of very rolling surface, and not too far from home, may be advantageously improved by an occasional manuring and a rotation of crops. In other words, they may be plowed, manured, tilled one or two years in hoed crops, then laid down to a variety of grasses with grain, mowed one or two years and pastured four or five years, or the mowing may be omitted, and they may be pastured six to eight years. Managed in this way, they will, while in grass, yield much more feed, proportionately, than they would if kept perpetually in grass. A portion of my pasture-fields being smooth enough to plow, and conveniently situated for being fenced, and some of the tillage land affording good water for stock, I occasionally pasture a tillage-field while putting a piece of pasture land through a course of plowing, manuring, a rotation of crops, and getting it down to grass again. Where the requisite circumstances are favorable enough to make this kind of tillage conveniently practicable, it is very good farming, leaving one with less poor, unproductive land than almost any other course would. Especially is it advantageous in the vicinity of populous villages, where pasturage is in great demand and commands a high price. I have particularly seen the advantage of this mode of culture during the late dry summer. The fields recently seeded anew to pasture, after a manuring and rotation of crops, kept green and supplied my cows with fresh feed, while the old pastures were parched by the drought, and became completely used up for the season.

Worn-out pastures, however rough and stony, may be made very productive by planting them with the common yellow locust tree. A completely triumphant illustration of the great value of the locust as an improver of poor land, may be seen on the farm of CLARK RICE, Esq., in Dummerston, Vt. I have just returned from a ride to his place, whither I went for the purpose of observing his improvement in this way in order to be able to speak of them in this communication.

A poor old sand knoll, that could not cover itself with grass, and bearing little vegetation of any kind, was fifteen years ago planted with young locust trees. It has now an open, pretty grove of trees standing upon it, and its surface is covered with a fine grass sward, which this year gave a good swarth, and now has a taller and thicker aftermath upon it than there is upon any of the mowing fields of the farm. The locust has made the improvement; nothing having been done for the land except to plant the trees. Some of the trees are ten inches through at the butt, and would make excellent posts for fences.

The farm has also another grove of locusts, twelve years old, standing upon a high ledgy knoll, the rock being in some places bare and in others from six to twelve inches below the surface. The larger trees growing here would now make good posts. A thick green growth of grass covers the surface, wherever there is any soil above the rock. A tillage field adjoining, which has always been well cared for, has not as much aftermath upon it as the knoll has.

Mr. Rice is so well satisfied with the improvement he has effected upon these knolls, that he intends to raise young locust trees enough to set over several acres of poor land adjoining. He sets his trees about two rods apart, and finds that sprouts enough spring up between them to cover the land sufficiently. Cattle being very fond of the foliage of the locust, he finds it necessary to keep them off the land for four or five years, or until the young trees have grown tall enough to be out of danger. But calves and sheep may run where the young trees are, without danger.

Walking about in these groves, my attention was particularly attracted by the soft velvety feeling of the sward under foot; it was like stepping upon down; and upon examination, I found a mat of locust leaves covering the ground, beneath the tall grass and all about its roots, convincing me that the grass could never become bound out.—The foliage of the locust does not injure the quality, nor does its shade diminish the quantity of grass, like most other trees; but on the contrary, the grass is of a deep green color and luxuriant growth in the shadiest places in these groves, and is greedily eaten by the cattle.

A great excellence of this method of improvement is, its adaptation to rough, stony, ledgy lands, covering them with a valuable and abundant herbage, besides providing the very best of fencing timber. Why grass grows so luxuriantly beneath the shade of the locust, is so well relished by cattle, and why the trees endow the land so remarkably with fertility, is more than I know. The facts are unquestionably so. The roots of the locust run deep, and perhaps draw considerable support for the tree from below the surface soil; then the leaf is very small, and heavy of its size, lying still where it falls, settling down about the roots of the grass and enriching the whole surface, while the leaves of most other trees are blown about by the winds, collecting in hollows or other sheltered places. There are but few forest trees whose leaves could stay on Mr. Rice's knolls; the raking winds to which they would be exposed would sweep them off.

Mr. Rice has also a young chestnut grove covering a hill-side of four acres. The land was in low condition at the time of planting the grove. Twelve years ago, in the month of October, it was plowed and sowed with winter rye, and at the same time chestnuts were picked from trees and planted among the rye, one nut in a place, in rows four feet apart each way. A scanty crop of rye was harvested the next year, and then the land was given up to the young trees, and cattle were ever after kept out. If to do again, Mr. Rice would omit sowing rye, it being too exhausting to such poor land, and hardly worth harvesting. It was very rare to find a young tree missing where a nut had been planted. The original sprout from the nut being invariably crooked and dwarfish, it was after four or five years' growth, cut down, and straight, handsome sprouts shot up from the stump, which, having the advantage of the original root to support them, grew rapidly. But even where the original tree did not happen to get cut down, it ultimately gave place to a straight thrifty sprout. In a very few years more, this young grove will afford valuable timber for fencing and building purposes. The land is worth much more than it would be, had it lain till this time in old pasture.

Where wood and timber are scarce, and there are rough pastures, so exhausted as to yield little feed of much value, and so rough and stony as to preclude cultivation, they may unquestionably be planted with trees and eventually made productive as forests, thus ultimately enhancing the income of the farm as well as the value of the homestead, whether to sell or hand down to children. But I am now opening a branch of my subject which alone requires a long article for its proper discussion; and as my present communication is already too long, I will stop with the bare suggestion of it. I am persuaded the time has come here in New England for the profitable expenditure of capital and labor in the improvement of old worn-out pastures. In quite a number of localities, the farmer is narrowed down to the question, whether he will improve his pastures or abandon the keeping of milch cows and the making of butter and cheese. Probably some mode or modes of improvement may be adopted that will prove efficient and profitable.

F. H.

Brattleboro', Oct. 4, 1852.

A NEW WHETSTONE.

We would call the attention of the public to the advertisement in another column of this paper, of Messrs. Webster & Co., respecting the celebrated *Talacre Burr Scythe* and *Grind Stones*, the popularity of which seems to be gaining ground very fast in this country. These stones, especially the scythe stones, seem to be particularly adapted to the use for which they were made. The sharpness of their grit is valuable, as it cuts the *gum* from the scythe, and from the stone which always collects on them when the dew is off the grass, thus leaving both entirely free and clean. The shape being oblong, or larger in the middle than at the ends, remedies in great degree the liability to whet the scythe across the edge, which in all beginners is a prevailing fault. The size being larger than the common stones, does its work more thoroughly, and does not require to be used so often, which will pay for the trouble of carrying. These properties combined, will fully compensate for the greater cost, besides the fact that they will last much longer than the old kind. They are particularly adapted to those fields, where the grass is heavy, and where large scythes are used.

It will be borne in mind that these are a *Welsh article*, and in order to have a supply on hand for the coming season, orders for them should be sent to the agents at once, that a supply may be imported to meet the demand at home and abroad.

These stones took the *first premium* at the late *World's Fair* in London, by the side of *twelve competitors*, which is a pretty good guarantee that they are valuable. Any further information respecting them, will be given by the agents upon application by letter, and samples forwarded in all cases where it is practicable. Those who intend to keep a stock, should look into this, and be prepared for the coming season.

*For the New England Farmer.***FEEDING APPLES TO COWS.**

MR. EDITOR:—A correspondent from Groton wishes to know if any of your readers have made experiments on feeding apples to cows. I thought this question had been settled a long time ago, that apples were good food for cows and stock of all kinds, including swine; but I have found, by conversing with many of the farmers, that they still have doubts. The old prejudice still lingers, that apples dry up the milk. I have tried the experiment of feeding apples to milch cows for nearly thirty years, and mostly sour apples; there is no food they are more fond of, and I think it would be profitable for farmers to set out orchards on purpose for cattle. It would be cheaper food than any thing else they could raise; but I would not recommend this, but rather to set out the best of fruit, and give the cattle the refuse, sending none but the best to market, which will always command a good price. There is no danger of overstocking the market with the best of fruit.

I have this year tried what quantity a cow would eat and not hurt her, but do her good. I began by feeding a small quantity at first, and increased until I gave them a bushel each per day. This quantity, so far from hurting the cows, has done them a great deal of good; one of them is fat enough for the butcher; and their milk was never better. When cows are fed with apples, or roots, or any thing of the kind, they should be fed regularly, and at the same time of day; if not, they will neglect to feed on poorer food, and stand and wait; by neglecting this precaution, many farmers have got an idea that green stalks and roots make cows poor.

Yours with respect, BENJAMIN WHICKLER.
Framingham, Nov. 1, 1852.

CRANBERRIES.

The cultivation of this excellent and wholesome fruit is receiving more attention in this State than ever before. No farm product has quicker sales, at high prices, than this. It is easily transported, keeps a long time, and may be prepared for the table in various and most acceptable ways. As a preserve, to be used in tarts, as a jelly, a sauce for the table, or for pies, it is scarcely surpassed by any fruit that grows. It is eagerly sought for by all, and the demand is rapidly increasing for exportation, even while the home demand is not half supplied. The low price of sugar has also had a tendency to increase the use of them. Mixed with apple, they give the latter a fine flavor and sprightly acid, and are preferred by some to being used alone.

By reports made to the agricultural society in Middlesex county, it appears that the cranberry may be produced abundantly by artificial cultivation; that is, by plowing swamps until the bushes are dead, then tearing them out roots and all, and planting the cranberry vines in sods throughout the reclaimed swamp. We have seen them raised in great abundance, and of fine size and flavor, in this manner.

In listening to the reports made to the Barnstable society at Sandwich, on Wednesday last, we were interested in one on the subject of cranberries, by Mr. O. BROOKS, JR. He said "the fact should ever be kept in mind that there is probably no place in the world so favorably situated for the production of the cranberry as Cape Cod.

"The growth of this fruit is confined to very narrow limits of latitude. If we go very far south or north of the latitude of the Cape we find it degenerates very rapidly in size, quality and quantity. It is stated on good authority, that the best specimens of this article in the markets of London, are labeled 'Cape Cod Cranberries.'

"Peat swamps exactly adapted to the cultivation of the cranberry abound to a greater extent on the Cape than in any other part of New England.

"The high price which good cranberries always command (being at present \$3.50 per bushel) shows that it is a most profitable crop.

"As stated by Mr. ALVIN CAHOON, of Harwick, who has probably done as much in growing the cranberry as any other man on the Cape, it appears that an average crop with him is *one bushel to the square rod*—which makes the good round sum of \$560 to the acre.

"The mode of preparing bogs consists in the simple process of getting the white sand on the surface, placing the turf underneath.

"A mixture of mud and sand he has found to be congenial to the growth of the vine, but such a soil also encourages the growth of the cranberries' worst enemy, the rushes."

We invite Mr. BROOKS and Mr. CAHOON to give us such further facts in relation to the cultivation of this plant as they may have it in their power to impart. It is the particulars—the details—of the success which those who undertake it anew will need.

*For the New England Farmer.***NATIONAL BOTANIC GARDEN.**

MR. BROWN:—The establishment of an American Botanic Garden at or near Washington, which should embrace every species indigenous to the United States and Territories, so far as they have been discovered, would redound to the honor of the nation and advance the cause of natural science.—There should be, at least, one hundred acres of land devoted to the purpose, including various kinds of soil adapted to the wants of different species of plants, and a sheet of water for aquatics as well as extensive conservatories and greenhouses, for growing such as do not withstand the climate. We have already many thousand species known to the botanist, and new discoveries and the spirit of adventure with which the world is rife at the present day will make daily additions to the catalogue. It therefore seems desirable that they should be collected together, so far as practicable, for the purpose of examination and reference as well as to exhibit to the world at one

view the extensive and varied productions of the American Flora. The enterprise would be attended with much expense in the outset, and would require many men and an annual outlay of money to keep it in order; but it would be money and labor well expended, and should be appropriated liberally, as the cause of agriculture would be benefited and the wealth of the nation increased in consequence. But were we to receive no pecuniary return, a National Garden should be established on a scale worthy the American people—one which would be the resort of scientific men of all nations, and who would know how to appreciate the favor of being permitted to examine all our plants in one collection.

There is no doubt there are kinds of grain, vegetables and fruits yet undiscovered in our new territories, which will prove equal, and perhaps superior, to any now grown, which might be experimented upon in a garden of this kind, and if found worthy, sent out for cultivation.

Many medicinal plants, dye woods and other productions, useful in commerce or the arts, are now growing in our western wilderness, unknown to any but the lonely Indian, who knows but little of their value. It appears as though it would be expedient for our government to send out an expedition to the unexplored regions of the West and other locations to examine the botany and collect seeds and plants for experiment; it would be a rich field for the student of Nature, and would be attended with much instruction.

The resources of America are as yet undeveloped, but the spirit of investigation is abroad, and our vegetable productions will be sought out and proved, and many new productions will ere long be added to the already numerous list.

Leominster, 1852.

O. V. HILL.

REMARKS.—We fully agree in opinion with the above, as to the establishment of a National Botanic Garden. That may be done by Congress, without political danger, and without any very great expense. A Botanic and Zoological Garden ought to be established at Washington, and might be filled with all manner of animals and plants by our naval officers who are constantly returning home from every part of the world. It would cost something, certainly, but the money would be mostly expended among a hard-working class of our population, and their establishment would promote the knowledge of plants and animals and gratify the tastes of the people.

Whatever objections may be made to the establishment of agricultural colleges, (and we think many reasonable ones may be) there would probably be but little difference in opinion in regard to a garden of plants and animals on a somewhat extensive scale.

UNIVERSITY OF VERMONT.—Through the politeness of Mr. E. R. H. HOWARD, we have received a catalogue of the officers and students of this University. It is one of the handsomest specimens of printing we have ever seen, and is from the press of Messrs. STACY & JAMESON, of Burlington. Whole number of students 135.

AUTUMN LEAVES.

O, Autumn leaves!

Summer's bright roses one by one have past;
Gone is the beauty of the golden sheaves;
Ye come at last,
Prophets of Winter hours approaching fast!

O, Autumn leaves!

Why look ye thus so brilliant in decay?
Why, for the dying year when Nature grieves,
Are ye so gay
With richer hues than graced her op'ning day?

O, Autumn leaves!

Ye, as ye don your crimson robes of mirth,
While dull decay a moment scarce relieves
Your forms from earth—
Ye tell us, happier far is death than birth!

O, Autumn leaves!

Like you the dying saint in splendor grows;
With each faint pulse of life that feebly heaves
At evening's close,
His ev'ry grace with added glory grows.

O, Autumn leaves!

Like you, he casts aside all hues of gloom,
And of his bright'ning hopes a chaplet weaves
That o'er his tomb
Throws the glad promise of eternal bloom.

For the New England Farmer.

INFLUENCE OF THE FRUIT STOCK.

MR. EDITOR:—A correspondent a few weeks ago made inquiries relative to the effect of the stock on fruit. He appears to question whether it can have any. Though the subject is far from being clear or definite in my mind, I will take the opportunity of making a few remarks. In the first place, I think it a fixed fact that the stock does affect the quality, and perhaps the color and size of the fruit—partly depending upon the nature of the stock and the graft, and their relative size and power. What makes one apple sour and another sweet? It must be the nature of the ingredients which the stock has the power of accumulating from the soil and the atmosphere; else all apples would be alike. Eight-tenths of the apple are composed of water (or acidulated juice,) and nearly two-tenths of carbon, which forms the pulp. The juice of the apple is partly drawn through the stock from the moisture of the earth, and partly through the leaves from the moisture of the atmosphere. Where a sweet apple stock greatly preponderates over the bearing graft of a sour apple, we should suppose the fruit would be modified by an increase of saccharine matter, so long as it retains its preponderance, and that the fruit of the graft would approach its original flavor in proportion as it gained in head. Such is, I think, the result of observation where extremes have been united. Where the fruit of the stock and the graft is similar in acidity, of course such influence is not perceived. I am inclined to believe that where a fruit is under the influence of the stock, should scions be cut and inserted on a stock of similar acidity, a distinct variety of fruit may be secured. Why we do not see more distinctly the influence of a grafted fruit, is, I apprehend, from the circumstance that the majority of stocks and scions are sub-acid, and not opposite in their nature.

Fruit elaborates itself principally in the open air, or draws in its nourishment through its own leaves; and were it not from this law there would be but little fidelity in the scion. But its accretion

is not wholly from the atmosphere, and hence, from circumstances above enumerated, the fruit is sometimes affected by the stock. I know of a gentleman who had a seedling pear which he has never been able to produce on any other stock. I have seen it stated in some back number of the *New England Farmer*, of a gentleman who grafted the Greening (I think) into one of the small branches of a thrifty tree, when its fruit gradually lost its original character and became identical with that of the original stock. Many pears are said to improve in flavor on the quince.

Cole says the Seckel grows larger, but poorer on the apple. A nurseryman once told the writer, that the Bartlett pear was not so good on the quince—which will be generally denied. The Red Russet, frequently alluded to in this journal, was grown on a Baldwin scion.

Being reminded of the utility of brevity, I will just observe, that though the stock does affect the fruit in a degree, under some circumstances, with the least care there is no danger of any fruit becoming merged or exterminated by continued re-grafting.

D. W. L.

Roxbury, Oct., 1852.

See article in another column entitled *Red Russet*.—Ed.

OLD APPLE TREES.

Apple trees, when very aged, are generally "hewn down and cast into the fire" as worthless "cumberers of the ground." The longevity, however, which is characteristic of this tree, prevents the necessity of extirpating it very often, and it is, indeed, extremely questionable whether in most cases it might not be perpetuated, like the olive trees of Athens, and the celebrated mulberry at Stratford-on-Avon, till its duration should be computed by centuries, rather than by years. Of this longevity we have a very interesting illustration in the case of the apple tree planted by Peregrine White, in the town of Marshfield, in this State, and of which a drawing, said to be very accurate, was published not long since in this paper. Mr. White was the first male child, of English parentage, born in New England, and died in Marshfield, in 1704, aged 83. The tree was planted probably about the year 1648, consequently is now *two hundred and four years old*, but still vigorous, and has produced "fruit every year without interruption" as far as the memory of the present owner—one of Mr. W.'s descendants of the fifth generation, extends.

In resuscitating old trees, or those which have become unfruitful from the combined effects of age and disease, it is proper in the first place thoroughly to cleanse the bark, especially in the vicinity of the ground, for it is at that point that the borer commits his depredations, and there also many other insects seek and find their hybernacular, or winter quarters. If the bark is very rough, as is most commonly the case in trees that are verging to senility, it is well to obtain some ap-

propriate instrument and remove it, taking care not to injure the alburnum, or to trespass upon the healthy parts of the bark beneath the scaly surface on the outside, which alone should be detached. This decortication must be performed with a nice hand, for although some orchardists advocate the entire denuding of the trunks of old trees, it is found that scarification is a most serious injury, especially where the system is weak and relaxed.

The coarse, mossy bark on the limbs should also be removed, and the whole washed and scrubbed vigorously with ashes and water till the surface assumes a smooth and fresh appearance. If there are any decayed places on the trunk, resulting from internal or external wounds, they should be cleansed, and the rotten matter removed, and the orifice filled with a composition of fresh cow dung, one part; clay, one part; leached house ashes, one part; and a little salt and plaster—the whole moistened with urine, and worked till it can be spread easily, and is sufficiently plastic to adhere to the place where it is applied. All old limbs should be removed by sawing; the stump must then be made perfectly smooth, and covered with a thin wafer of grafting cement. In no case should the amputation be at a distance from the point of junction, but as close thereto as the saw can be made to run.

As to the tops, it is better, perhaps, to remove a portion of the limbs, as the energy of the roots and trunk may not be adequate to secure the necessary support: but we would by no means advise the removal of many of the limbs, especially those of the larger size near the base of the top. By cutting out mostly the vertical shoots, and retaining the horizontal ones—thus giving the top a shape in some degree resembling an umbrella reversed, the sun-light will be let in, and new wood will be developed more rapidly and vigorously than if an opposite course of pruning should be adopted. As the new wood progresses, the older limbs may be removed, till the top presents wholly a new growth.

Where there is a single tree, or there are a few trees valued for their particular location or kind of fruit, the roots should be laid bare for at least six feet from the trunk, by a careful removal of the soil to the depth of one foot. The excavation must then be filled in with the very best and richest description of garden loam, mixed with compost in which lime and wood ashes—leached or unleached—constitute a large share, and the surface covered with manure, the best that can be procured.

In this way, an old tree may be resuscitated, and, if desirable, grafted with any variety of improved fruit, or left to produce its own, as the operator may see fit to direct. One thing against which we think too much cannot be said, is the practice—now quite prevalent—of plowing among

orchards with as little care as in any common mowing field. It has been asserted by some that this is a benefit to the trees—that it causes them to send out more shoots, and increase the constitutional vigor and fecundity of the trees! Why it should do so is a question which no one, perhaps, can rationally resolve. It seems as natural to suppose that the wounding or abscission of the lateral roots, in the case of a standing and bearing fruit tree, should prove injurious as in that of a young tree which is being removed for the purpose of transplantation. The more roots in either case the better, we contend, and if orchards are tilled, let the soil be plowed lightly, and the operation of inverting the sward conducted with the greatest care. But before setting an orchard the ground should be thoroughly subsoiled, cultivated and manured.

November, if the weather is moderate, is as good a time, perhaps, as any month in the year for these operations.

LEOMINSTER CATTLE SHOW.

The Farmers' and Mechanics' Association of Leominster held their first Annual Cattle Show on Wednesday, Sept. 29. This Association was formed in November, 1851, and is strictly a town affair, none being permitted to be members except citizens of Leominster. There are now 239 members belonging to the society, and it is now in a very flourishing condition. The exhibition of fruits, flowers and fancy and manufactured articles was in the new Town Hall, a fine edifice erected last year.

The Hall presented a very beautiful appearance. Around the rostrum were hung some fine ornamental pictures.

A fine display of stuffed birds was contributed by Dr. Pierce, and Capt. C. Nicholson furnished two cases of birds and insects from Brazil, which attracted much attention.

The exhibition of fruit was very fine, and was well worthy of the farmers of Leominster; indeed we have seldom seen a better display.

Specimens of patent leather manufactured in Leominster were exhibited by N. W. Stoddard.

The comb makers of Leominster made a fine show of their handiwork. G. & A. Morse had fine specimens of every variety, from the pocket-comb to the elaborate back-comb. Wakefield, Prescott & Co. also made a fine display. Jonas Colburn contributed 22 different patterns of head-combs. Tisdale & Fairbank also had some beautiful specimens.

Ladies of Leominster contributed for the occasion some very fine specimens of bread. The loaves were large, and looked nice enough for any man.

The hall and tables were finely decorated with flowers, and presented a very fine appearance. The tables in particular were well arranged, and did much credit to the Committee. The hall was filled to overflowing, and so large was the attendance, that it was rather difficult to get a peep at the many wonders exhibited.

At 10 o'clock, the drawing match took place on a hill near the Town Hall. Nine teams were en-

tered. The weight of the cart drawn with its load was 4780 lbs., and the match attracted a great crowd.

Francis Wayland, Jr., of Worcester, delivered the address. Joseph Mason, Esq., was to have delivered the annual address, but was prevented by illness.

Mr. Wayland, after a brief introduction, remarked that farmers too often complain that while others are getting rich, while the merchant and mechanic are coining money and growing opulent, those engaged in agricultural pursuits continue poor, notwithstanding all their attempts to get along in the world. He thought the complaint a just one, and endeavored to show what caused this difference of success. He thought it was because farmers as a class are behind the age. They are willing to plod on in the paths trod by their fathers and fathers' fathers. They are content to go on as they have for years without attempting to make any improvements. He thought science should be brought in and made subservient to the interests of the farmers. He thought increased investigations and experiments, a greater scope of reading, more attention to the new discoveries that are continually being made, and a deeper pursuit of those sciences which may be made to subserve the interest of the agricultural community would make a great change for the better.

Abel C. Wilder, Esq., of Leominster, then read a Poem, entitled "Farmers' and Mechanics' Associations." Although a farmer, Mr. Wilder presented a very pleasing poem, and his production elicited much praise.

At one o'clock, a procession was formed and the company marched to Yale's tent which had been spread on the common. About 500 persons were seated at the tables. The entertainment was provided by E. R. Balch, and did credit to the caterer.

At 3 o'clock a procession of 57 horses and colts, and 80 yoke of oxen, marched through the principal streets of the town, and the exhibition then closed.

The Show attracted a large crowd of visitors, and the town presented a very animated appearance. The exhibition was very fine, and the citizens of Leominster may well feel proud of their First Cattle Show. Everything passed off admirably, and nothing occurred to mar the pleasure of the occasion. The Leominster Farmers' and Mechanics' Association may now be considered on a firm basis, and if we mistake not, will exert an influence on the interests of the town which will prove highly beneficial.—*Traveller.*

BENJAMIN FRANKLIN: A BOOK FOR THE YOUNG AND OLD: FOR ALL. Compiled, printed and published by SAMUEL HUTCHINS, Cambridge, 1852.—This is a duodecimo book of 36 pages, mostly compiled from the writings of Dr. Franklin, but interspersed with such introductory remarks and explanations as to give the extracts peculiar application and force. It ought to be carefully read, many times over, by every boy and girl in the country. It would be the means of establishing many a good principle.

THE GLOUT MORCEAU PEAR.

BEURRE D'AREMBERG, } *Of Foreign*
 BEURRE D'HARDENPONT, } *Collections.*
 LOMBARD,

The original of the above portrait was furnished us by Col. WILDER, and was grown in his garden at Dorchester. This gentleman's skill in horticultural matters, and the zeal and interest he manifests in everything that relates to the garden and the farm, are doing much for the cause throughout New England.

We have other copies of specimens of fine fruit from Col. WILDER's garden, drawn from life, which we shall give from time to time, and we improve this opportunity to express our thanks for the aid so cheerfully afforded us in this department of the *Farmer*.

The Glout Morceau pear has been under cultivation in the vicinity of Boston for fifteen or twenty years. It has not, however, until recently, been sufficiently known or appreciated, but it is now

generally admitted to be one of the most delicious of our winter sorts, and commands as high a price in the market as any other variety.

Fruit; above medium size, frequently large. Form; obtuse pyriform, inclining to oval, tapering rather abruptly towards the base, neck short and thick, outline and surface somewhat irregular. Stem; inserted in a slight depression about one inch in length, but in luxuriant specimens it is frequently short and fleshy, having the peculiar knobby appearance of the Beurre d'Arenberg, with which it has so often been confounded. Calyx; open, sunk in moderately deep coarsely furrowed basin. Color; pale lemon yellow, with occasional traces of russet, but seldom with any red; skin smooth and handsome. Flesh; white, fine grained, buttery and melting, with a mellow-like rich saccharine flavor; in unfavorable soils sometimes astringent. Season; December to January, keeps well.

The Glout Morceau is received from France, under the name of *Beurre d' Aremberg*, where it is more extensively cultivated for the market than any other winter pear. The tree is hardy, vigorous, and produces well, but like many other varieties, requires good cultivation, and until it has attained to considerable maturity, frequently fails to set a full crop.

For the New England Farmer.

FOUL CELLARS.

FRIEND BROWN:—Thinking that what I have to communicate may interest your readers, I send you a page from my note-book:

One day last week, a little girl, aged eleven years, daughter of a respectable farmer, living near this village, died suddenly. The family physician had been called a number of times within a month, and had prescribed for nearly every member of the family, which was large.

On the day of the death of the child above-mentioned, he was called to visit three children of the family, whom he found quite sick, and all exhibiting nearly the same symptoms. After attending to these, he found the little girl, who, without attracting the notice of her parents, had reclined upon a bed, and was exhibiting alarming symptoms.

He acquainted the family with her situation, and expressed his fears that she would not live out the day. She died before night. The other children still remain sick.

The doctor expressed to the family his belief that there was some local cause for the sickness. Search was made, which, for awhile, proved fruitless. At length, underneath the potato bin, the cause was discovered in the form of a mass of partially eaten potatoes and the offal of rats undergoing the putriferactive fermentation, and filling the cellar and whole house with a most offensive odor. The man who attempted to remove this mass was made so sick as to vomit, and compelled to desist. There now remains no reasonable doubt that the sickness of this family and the death of the child were caused by this decaying vegetable matter.

We are told that the curse causelessly does not come. No more does sickness. In the physical and in the moral world, every effect must have an adequate cause. And well would it be, if, when sickness invades our dwellings, instead of endeavoring to quiet our fears by sending for a physician and ejaculating, "Tis a mysterious Providence," we would inquire after the cause, and set about removing it.

Housekeepers should learn from the above-mentioned fact, the importance of carefully removing from the cellar, in early spring, every vestige of vegetable matter that will be likely to decay.—The cellar should be kept scrupulously neat. Bins, casks, and all vessels, in which vegetables have been kept during the winter, should be cleansed and aired. The walls should be cleaned and whitewashed, at least once a year; and, if vermin are allowed to enter, deodorizing substances should be sprinkled about their haunts.

The same caution should be used at all times, but especially during the warm season, respecting sinks and vaults, and other places productive of

offensive odors. Let this precaution be exercised, and dysentery and fevers would be less prevalent and physicians would find less employment and human life would be prolonged.

There are some interesting geological facts connected with this place. There is evidence that the Ashuelot, which now flows westerly into the Connecticut, through Hinsdale, once flowed south through Warwick and emptied into Miller's river. The channel of the river may easily be traced all the way from Winchester to Miller's river, in the town of Orange. On the highest ground in Warwick, nearly six hundred feet above high water mark, on the Ashuelot, in the village of Winchester, numerous pots, of various sizes, may be seen, proving conclusively that for many ages a large stream of water must have passed over that spot.

It is obvious that the ground on which the village of Winchester is built, the village of Swansey and most of the town of Keene and a part of Marlboro', was once the bed of a large lake. When the barrier between Mount Holyoke and Tom gave way and drained off the great lake, which covered the valley, extending from Northampton to Brattleboro', the ridge of land which separates Winchester from Hinsdale also gave way, and the little Ashuelot found a shorter course to the Sound.

To one interested in the changes through which this mundane sphere has passed, this region affords abundant matter for speculation.

Yours, &c.,

H.

Winchester, N. H., Oct. 17.

REMARKS.—The above article deserves especial attention.

BARKBOUND TREES.

Some over-wise people have an idea that when a tree gets mossy and barkbound—the latter another term for the want of growth and weakness, consequent upon neglected cultivation—it is only necessary to slit the bark up and down the stem with a jack-knife, and it will at once spread out and grow. This is sheer nonsense. Dig about and cultivate the roots, and the bark will take care of itself, with a scraping off the moss, and a washing of the stem with ley or soap suds, or chamber slops, which last is quite as good. The increased flow of the sap, induced by a liberal feeding of the roots, will do its own bursting of the "hide-bound" bark, which is simply its enfeebled condition as a consequence of its poverty of root. No one thinks of turning out a bony, half-starved calf in the spring into the clover-field, with the skin on its sides all split through with a knife in order to add to its growth. But this last proposition is quite as sensible and philosophical as the other. Nature takes care of itself in these particulars. Sap in plants is what the blood is to animals. Its vigorous flow reaches every part of its composition, and gives to each its proper play and function. We can show frequent instances of a decrepid, shrivelled branch, by the throwing open and manuring of the roots, and a thorough pruning of the whole top, increasing from an inch to two inches in diameter in a single season; and without assistance it grew, bursting and throwing off its old contracted bark as freely as the growth of a vigorous asparagus shoot will develop itself during a warm shower in May. Such nostrums are only the invention of the head to the laziness of the hands.—*Anonymous.*

THE TRUE COURSE.

With energy for prompt and vigorous action, and capacity for sober thought and sound reflection, a man may enter upon business with some assurance of success. His home will exhibit the best picture of his true character. What he undertakes is well done. His fences are in order—there is an air of neatness and thrift about his dwelling and out-buildings; his grounds are laid out with reference to beauty as well as convenience—ornament and use have been consulted in planting out his fruit and shade trees, and the garden evinces that his wife and daughters have joined him in his cultivation. He does not waste the long winter evenings in idleness, nor does his family neglect this season of improvement. While his children are engaged in the rudiments of learning, he surveys the action of our National and State Legislatures! and studies thoroughly the policy by which both are guided. His family do not content themselves with the light reading of the day, but history, biography, morals and religion receive a due share of attention. They lay up in winter, from reading, conversation and reflection, a harvest of more value than the bounties of autumn. The mind thus stored, casts light upon any vocation. It cheers the house-wife in her round of duties and lightens the labors of the field.—*Address of Hon. T. Jenkins before the Oneida County Ag. Society.*

REMARKS.—MR. JENKINS is not only a good farmer, but a good, safe legislator, conferring honor upon the position he occupies as a member of Congress, by his mild but firm counsels, and by the uprightness of his acts and character. We should be glad to receive his whole address.

For the New England Farmer.

WORKING COWS.

FRIEND BROWN:—I noticed in the October No. of the *N. E. Farmer*, a few editorial remarks in regard to field labors of the cow. Judging from the tone of these remarks, the cow ought not to be exempted from the "surveillance of the yoke."—Now, friend B—, thou hast a right to *thy* opinion, and I also have to *mine*—hence, for the present, we will agree to differ. So far as right and wrong is concerned in the matter, I will leave.—Of course the ox and the cow were created, and given to and for the use of man. The ox was intended for a beast of burden, and the cow for a different use. The former was made strong and muscular, calculated, of course, for the services to which he is subjected;—the latter, by her construction, is unfitted to wear the yoke, but is purposely fitted for the use to which she is *mostly* applied. I know that in some countries cows are made to bear the yoke, and labor in the fields from rising to setting sun,—and consequently are of two-fold profit to their owners. But it does not look reasonable to me to suppose that the milk drawn from cows worked in this manner can be pure and wholesome. As a matter of course, cows that are obliged to haul the plow and cart in the dusty fields in the sunny days of summer, must suffer excessively from the heat. Such being the case, the milk must receive more or less impurities, and consequently rendered unwholesome.

'Tis true, I am not in possession of facts that will clearly prove this to be the case—but such a *conclusion* looks to me rational. I hope I may receive light on the subject, either *pro* or *con* my opinion.

A. TODD.

Smithfield, R. I., 10th mo., 1852.

REMARKS.—Friend TODD takes the extremes.—We would not advocate working the cow "from the rising to the setting sun;" we would not do that with our oxen or horses.

There are a large number of farms in New England where most of the team labor of the year may be performed with a good horse; a few days' plowing and hauling of manure or stones being all the ox work needed. Now, in such cases, if the farmer would train a couple of strong and active cows to the yoke, so that he could supply this deficiency from his own stall, he would find a saving in cash, a still greater one in convenience, and do no injury to the animals, provided he used them considerably,—a few hours at a time, and always when the animal was in a proper condition to work, with the udder empty and in good flesh and strength. Mares are used as freely as horses, and even during gestation it is thought better to work the animal moderately through the whole time. We should recommend the working cow, however, only as a matter of convenience, in such cases as mentioned above, and not as a general practice.

SCIENCE AND AGRICULTURE.

Look at that wide valley, with its snow-clad summits at a distance on either hand, and its glassy river flowing cribbed and confined, in the lowest bottom. Smiling fields and well-trimmed hedges, and sheltering plantations and comfortable dwellings, and a busy population, and abundant cattle, cover its undulating slopes. For miles industrious plenty spreads over a country which the river formerly usurped, and the lake covered, and the rush tufted over, and bog and mossy heath and perennial fogs and drizzling rains rendered inhospitable and chill. But mechanics have chained the river, and drained the lakes, and bogs, and clayey bottoms; and thus giving scope to the application of all the varied practical rules to which science has led, the natural climate has been subdued, disease extirpated, and rich and fertile and happy homes scattered over the ancient waste.

Turn to another country, and a river flows deeply through an arid and desolate plain. Mechanics lift its waters from their depths, and from a thousand artificial channels directs them over the parched surface. It is as if an enchanter's wand had been stretched over it—the green herbage and the waving corn, accompanied by all the industries of rural life, spring up as they advance. Another country, and a green oasis presents itself, busy with life, in the midst of a desert and sandy plain. Do natural springs here gush up, as in the ancient oasis of the Libian wilderness? It is another of the triumphs of human industry, guided by human thought. Geology, and her sister sciences, are here the pioneers of rural life and fixed habitations. The seat of hidden waters at vast depths was dis-

covered by her. Under her directions mechanics have bored to their sources, and their gushing abundance now spreads fertility around. Such are the more sensible and larger triumphs of progressing rural economy—such as man may well boast of—not only in themselves, but in their consequences; and they may take their place with the gigantic vessels of war, as magnificent results of intellectual effort.

VEGETATION OF THE FROZEN REGIONS.

The following extract is from Seaman's "Botany of the Voyage of H. M. ship Herald, under the command of Captain Kellet," in search of Sir John Franklin. The accounts of the remarkable phenomena exhibited in those icy regions will be found new and exceedingly interesting:

"The soil is always frozen, and merely thaws during the summer, a few feet below the surface. But the thawing is by no means uniform. In peat it extends not more than two feet, while in other formations, especially in sand or gravel, the ground is free from frost to the depth of nearly a fathom, showing that sand is a better conductor of heat than peat or clay, and corroborating the observation of the accurate J. D. Hooker, who, after a series of experiments in India, arrived at the same conclusion. The roots of the plants, even those of the shrubs and trees, do not penetrate into the frozen subsoil. On reaching it, they recoil as if they touched upon a rock, through which no passage could be forced.

"It may be surprising to behold a vegetation flourishing under such circumstances, existing independent, it would seem, of terrestrial heat. But surprise is changed into amazement on visiting Kotabue Sound, where on the tops of icebergs, herbs and shrubs are thriving with a luxuriance only equalled in more favored climes. There, from Elephant to Escholtz Point, is a series of cliffs from seventy to ninety feet high, which present some striking illustrations of the manner in which Arctic plants grow. Three distinct layers compose these cliffs. The lower, as far as it can be seen above the ground, is ice, and from twenty to fifty feet high. The central is clay, varying in thickness from two to twenty feet, and intermingled with remains of fossil elephants, horses, deer, musk-oxen. The clay is covered by peat, the third layer bearing vegetation, to which it owes its existence. Every year, during July, August and September, masses of ice melt, by which the uppermost layers are deprived of support and tumble down. A complete chaos is thus created; ice, plants, bones, peat and clay, are mixed in the most disorderly manner. It is hardly possible to imagine a more grotesque aspect. Here are seen pieces still covered with lichens and mosses, there a shoal of earth, with bushes of willows; at one place a lump of clay with senecious and polygones, of another the remnants of the mammoth, the tufts of hair peculiar to burial places, and evidently decomposed animal matter. The foot frequently tumbles over osteological remains, some elephants' tusks measuring as much as twelve feet in length, weighing more than two hundred and forty pounds. Nor is the formation confined to Escholtz Bay. It is observed in various parts of Kotabue Sound, on the River Buckland, and in other localities, making it probable that a great

portion of North-western America is underneath a solid mass of ice. With such facts before us, we acknowledge that terrestrial heat exercises but a limited and indirect influence upon vegetable life, and that to the solar rays we are mainly indebted for the existence of those forms which clothe with verdure the surface of our planet.

"A curious fact is stated respecting the condition of the vegetable world during the long day of the Arctic summer. Although the sun never sets, while it lasts, plants make no mistake about the time, when if it be not night, it ought to be; but regularly as the evening hours approach, and when a midnight sun is several degrees above the horizon, droop their leaves, and sleep even as they do at sunset in more favored climes.

"'If man,' observes Mr. Seamen, 'should ever reach the pole, and be undecided which way to turn when his compass becomes sluggish, his time-piece out of order, the plants which he may happen to meet, will show him the way; their sleeping leaves tell him that midnight is at hand, and at that time the sun is standing in the north.'"
—Fitchburg Reveille.

For the New England Farmer.

"WHERE DOES WOOD COME FROM?"

MR. EDITOR:—I perfectly agree with you, in some remarks made a short time since, with regard to the system of editors in general not giving proper credit to such selections as they may deem of sufficient importance to be transferred into their respective columns. To say nothing of the manifest injustice in such a case, which is a matter pertaining more particularly to the editorial province, it deprives the reader of a very valuable index by which, alone, he is to determine to whom he is indebted for information received, or against whom he is to make a sally in case he should chance to differ in any respect.

An instance of this system of misrule occurs in the *New England Farmer* of June 1st. (Pardon me, but in justice I would say, that such instances are exceedingly rare.) (a). A very valuable article upon the growth of trees—the principles of which are mainly contrary to my experience—appears, credited to—"Exchange." Hence, instead of presenting my objections directly to the author, who would be most likely to satisfactorily define his position, I am under the necessity, if desirous of any explanation at all, to take the circuitous route of presenting them to some miscellaneous print with the hope that they may chance to meet the eye of the one for whom they were intended.

But without further remark on this head, I will proceed immediately to make my objections, and "trust luck." The writer after detailing at some length with regard to various experiments, finally comes to these conclusions—"Where then does wood come from? We are left with only these two alternatives, the water with which it was refreshed, or the atmosphere in which it lived. Now it can be clearly shown that it was not due to the water; we are consequently unable to resist the perplexing and wonderful conclusion, that it was derived from the air."

I will simply ask, by what system of experiment can it be so "clearly shown" that water does not also materially aid in the production of wood? No one denies but that other elements than those de-

rived from the air contribute most essentially to animal life, and consequently growth; and yet actual experience teaches us that the same law which governs the animal kingdom in this respect, likewise applies to the vegetable. But, as I have upon another occasion expressed my views at some length in this connection, I will argue the case no further here. I venture to say, however, that I am able, at any time, and as conclusively as may be, to show that wood is *equally* at least the product of water as of air.

R. H. HOWARD.

Burlington, Vt., Nov. 24, 1852.

REMARKS.—(a) Our correspondent is mistaken in supposing that we were wrong in crediting the article which we copied a few weeks ago in relation to the "growth of trees," to "Exchange." It had lost its paternity, and we were obliged to credit it to an exchange, or be chargeable with plagiarism ourselves.

Your proposition is accepted.

THE POTATO DISEASE.

The *Evening Post* publishes some notes on this subject, the result of the investigations of Mr. Molloy, of Rochester Avenue, a magistrate of the County of Dublin. It says:—According to Mr. Molloy's explanation, there are two species or distinct types of the potato rot—one produced by atmospheric influence, and the other caused by aphids or insects. In the case of that species of rot now under consideration, there is a small insect of the locust species, about the size and color of a flea, and fully as rapid in its movements, and active in its habits of concealment. This insect feeds upon the under side of the leaf, and in the dusk of the evening they can be seen in thousands committing their depredations, but if the slightest touch be given to the plant they instantly disappear. Whether they perforate the leaf has not been fully ascertained, but Mr. Molloy has satisfied himself that the spot they bite, when exposed to the sun, the upper or smooth surface of the leaf becomes marked with a brown circle, which spreads day by day, until the entire foliage becomes of the same color, and destitute of every principle of vegetable life.—But it is not alone in the utter ruin of the leaves that the ravages of this minute locust are most destructive. Mr. Molloy has traced its operation further. He has discovered that the insect deposits eggs which, after a few hours—perhaps a day or two—exposure to the atmosphere, produce larvæ, so minute as to be almost imperceptible to the naked eye, and these little creatures are so rapid in their movements, and so subtle in penetrating the earth, that they are scarcely perceived ere they disappear, so quick is the transition.—This larvæ—a millipede—grows to the length of about a sixteenth of an inch, and from the hour it is disengaged from the shell to the period at which it assumes the form and habits of the locust, it feeds upon the tuber, burrowing beneath the surface, and leaving a poisonous deposit there, which diffuses its pernicious agency throughout the entire tuber, producing a dusky hardness, in the first instance, and rottenness and fetid pulp afterwards; so that this insect, whether in the larvæ or the locust state, is equally destructive to the potato—in the latter it poisons and destroys the

leaves, and in the former it poisons and destroys the tuber. Mr. Molloy has been at considerable pains in his inquiries as to the origin of the potato disease, and it was not until lately that he discovered the existence of this locust, which, in size, form, structure, habits, subtilty of movement, and evasion of detection, appears beyond all doubt—at least to us—to be a new creation in this country of the insect tribe. We never before saw anything like it, either in the larvæ or the insect state. From his investigation of their operations and effects, he is perfectly satisfied that they are the origin of that terrible calamity under which this country has so deeply suffered.—*Dublin Express*.

PRESERVATION OF DAHLIAS.

The complaint is common that dahlias lose their vitality during winter by dying or decay. The truth is that many are overstocked with caution, and "kill their bulbs by kindness." A person who has sense enough to harvest a potato, and preserve it during winter, need meet with no disappointment by the failure of dahlias. To ensure success, it is only necessary for the bulbs to be properly ripened, and packed away in a dry, cool place. The following will be found a good treatment:

As soon as the frost has blackened the tops, draw the soil about the stocks to the depth of three or four inches to prevent the freezing of the tubers by any sudden change of weather. When it becomes unsafe for them to remain longer in the ground, say the last of October or first of November, select a pleasant day, cut the stocks an inch above the surface, and with a spade carefully raise the whole cluster of bulbs from their bed. They are very tender when green, and care must be exercised not to separate them from the crown. When the soil becomes dry remove it, and pack the roots on a shelf in the cellar; simply covering them with a little dry sawdust or sand. The bulbs ought not to be divided from the foot-stock until the eyes report themselves in spring.—*Exeter News-Letter*.

ASHES.

Ashes, according to the most accurate analysis, contain a valuable proportion of sulphates, silicates, phosphates and carbonates of lime, with phosphates of potash, soda, lime and magnesia, together with certain other substances in smaller yet important quantities. An accurate and critical examination of them also reveals the presence of a considerable quantity of imperfectly constituted carbonaceous matter, (charcoal.) In ashes, therefore, the scientific reader will at once discover that we have all, or nearly all the materials of which some plants, and especially wheat, are composed. "It will seem," remarks a distinguished writer on Agriculture, "that ashes, mixed with the soil, will supply the quarter part of the substance of wheat." We are acquainted with several intelligent agriculturists who refuse to dispose of their house ashes on any terms. Formerly they were in the habit of selling them at a merely nominal price—about one shilling per bushel, and were glad to get rid of them at that rate, but now they are willing to purchase at twice that price. As a stimulant for Indian corn, we consider ashes, of good quality, worth fifty cents per bushel. As an ingredient in the

compost heap they are of inestimable value, and also as a dressing for turnips, cabbages, beans, &c. Even leached ashes are now bought up by farmers, and applied as a top-dressing to lands in grain and grass. They are also used with success as an ingredient in compost, and for giving increased energy to fruit trees. There is scarcely a single modification of vegetable life which is not essentially and powerfully benefited by their application.—*Norway Advertiser.*

For the New England Farmer.

THE RED RUSSET.

MR. EDITOR:—A friend has called my attention to a communication in your valuable paper of the 2d inst., making some inquiry in regard to the Red Russet apple. With your permission, I give such information as I have.

The original tree is now standing in this town, on the farm of my father, Aaron Sanborn, and I had the pleasure, a few days since, to assist in gathering its fruit. The circumstances of the origin of this new fruit are these. Ten or twelve years since, my father grafted the branches of a large tree of natural fruit with grafts of the Baldwin. This tree stood near a large Roxbury Russet tree, and some of its branches extended into the top of the latter. When the grafted tree began to bear, it was noticed that those branches most remote from the Russet tree bore Baldwins, (like the scions) and those nearest a different fruit, which resembled in its outward appearance a compound of the Baldwin and Russet. The fruit of this new kind was put by itself, and its characteristics noted. In two or three years its remarkable and valuable properties were clearly perceived. It had its own clearly defined and strongly marked peculiarities. I should add, that a part only of the branches of the grafted tree, which were nearest the Russet tree, bore the new fruit; side by side with the grafts bearing the Red Russet, were others bearing Baldwins. One graft, however, then, and since, has borne only one kind of fruit.

I consider the Red Russet a compound of the Baldwin and common, or Roxbury Russet, containing the best qualities of these two kinds, modified somewhat by the native stock in which the grafts were set. Of the cause of this combination of different kinds of apples, to form a new kind, I am not well enough acquainted with vegetable physiology to speak. Of the fact itself, however unusual, there is no doubt.

Your correspondent inquires if the Red Russet is a permanent fruit. On this point, I can say, that my father has now in bearing condition, a dozen trees of different ages and kinds, which he grafted with grafts from the original branches. From these trees, we have gathered this fall fifteen or twenty barrels. In all cases the fruit is a true type of the original. We have tested, in every respect, the fruit from these trees, (in years past) and find it like the original.

Others, among them, Mr. Editor, your lamented predecessor in the *Farmer*, Mr. Cole, have had grafts from the original tree. In all cases, the fruit has been like the graft. Of the permanency of this new fruit there can be no doubt.

I consider the Red Russet the best winter apple raised in this country, and think that when generally known, it will take the place of the Bald-

win and common Russet, both for our domestic market, and for exportation. It keeps longer and better than any apple I have ever known. I think with us, it will keep and retain its good qualities nearly two months longer than the Roxbury Russet. We keep them in our own cellar until July and August, and they remain apparently as firm, juicy and rich as ever. The Red Russet tree is also a great bearer, as much so as the Baldwin, which indeed, in this particular, it closely resembles.

I see by my paper that I am spinning a long yarn. I do not know whether I have given your correspondent (having mislaid his communication) information on the point which he desires, but hope so. After all, however, what I have written is about as much like the reality, as the "smell of the mug" was like the Dutchman's "goot" cider.

Respectfully yours,

CHAS. H. SANBORN.

Hampton Falls, N. H., Oct. 20, 1852.

HUMAN LIFE.

According to the statistics on the subject, human life has been prolonged materially since the advent of science and civilization, and the average duration of life is now steadily on the increase. In the city of Geneva, in the 16th century, 1 in 25 died annually; in the 18th century, 1 in 34; and at the present time 1 in 45 is the average mortality. In the British Navy, among adults, the mortality is only 1 in 100, or thereabouts. In the American Army, with superior medical facilities, the mortality is said to be only about 1 in 300. In London, during the last century, the mortality was 1 in 32; in 1838, 1 in 36. Within the last 20 years the mortality in Russia has been 1 in 27; Prussia, 1 in 36; France 1 in 39.07; Holland, 1 in 39; Belgium, 1 in 43.91; England, 1 in 23.07; Sicily, 1 in 82; Greece, 1 in 30; Philadelphia, 1 in 42.03; Boston, 1 in 45; New York, 1 in 37.02. The great rush of immigration to New York has made the mortality of that city the greatest—otherwise the health is equal to any American city.

These statistics might be given more abundantly, but with the same tendency. Enough has been presented to show that science, knowledge, cleanliness, and virtue, conduce to the prolongation of human life. A great deal is doubtless owing to the increase and diffusion of medical science, which has changed habits of living, attracted attention to ventilation, and examined into the causes which preserve health or produce illness. These statistics certainly establish a pleasing fact.

AIMING AT EMINENCE.—Do not trouble yourself about "rising to eminence." If, in consequence of your writings or your deeds, you should become eminent, very well; but to do anything for the sake of "rising to eminence," is unworthy of a man. Very comfortable and very noble lives are led in obscurity. Moreover, true eminence is not attainable by any man who places it before him as his chief object, because that indicates an inherent weakness of character.—*Home Journal.*

Drinking water neither makes a man sick, nor in debt, nor his wife a widow.

SINGULAR FACT—LARGE TREES.

There is now standing on the premises of John and Mahlon Carver, in Bayberry township, Pennsylvania, an elm tree that measures twenty-five feet in circumference one foot from the ground, and the trunk retains its size with but little diminution for over thirty feet, where the limbs branch out. A curious incident is connected with the history of this tree, in the fact that the farm on which it stands was taken up by patent from William Penn by John Carver, who came over with him from England, and that the premises have regularly descended from father to son by will, and always to "John Carver," of which the seventh of the name is residing thereon at the present time. It is very doubtful whether there is any other property in the county which has never been sold. There are also growing on the premises two pear trees which came from England with the original John Carver, one of which has a plentiful crop of pears at the present time.

There is also standing on the premises of Alfred Worthington, in the same township, a chestnut tree that measures, one foot from the ground, 28 feet in circumference, and 6 feet from the ground 25 feet 8 inches. This tree retains its full vigor, and is probably the largest tree in the country.—*German town Telegraph.*

For the New England Farmer.

NOTES OF THE SEASON.

FRIEND BROWN:—In the early part of the present month I made a short visit in the town of Sandwich, N. H. This is an excellent grazing town, its steep hill-sides producing an abundance of fine feed, and large numbers of cattle and sheep are fattened and sold there every year. This year, however, the drought cut off the feed early in summer; so beef is now a scarce article. Hay is dear and stock is very cheap. Here in Rhode Island, we have a good supply of fall feed, but *there* the fields and pastures are almost destitute of verdure. On rich, moist land, grass appeared to be alive; but I saw acres together on which the roots appeared to be dead. Many persons there think the hay crop will be lighter next year than it is this.

The yield of potatoes is good, and scarcely any rotten ones are found. Corn is sound, but injured by the drought. Wheat yielded better than usual. Apples are abundant in all sections of the country, though I think they are not quite as large as usual. One man said he thought the skin was thicker than usual, and he had an idea that apples will keep this winter better than common. Time will tell. Old orchards seem to have remembered their former fruitfulness, and the way the trees are loaded this year seems to ask the indulgent farmer to spare them a little longer. The plow, the hoe, and manure, will work wonders for the old trees.

Such is a brief account of the agricultural prospects of that section of the country, and here I might stop:

"But see the fading many-colored woods,
Shade deepening over shade;"

and I can hardly lay aside my pen without saying a few words about *them*. All who have ever seen our New England forests in autumn, especially those in mountainous districts, must admire their beauty. I have often looked upon them with delight, and *felt* there is beauty, *even in death*; and

now, as I approached the mountains in Carroll county, the view appeared, if possible, more pleasing than ever. The umbrageous sugar maple, whose thick foliage afforded such a cool retreat from the scorching rays of the summer sun, had exchanged its green dress for one of orange and gold, tinged with crimson. Other deciduous trees had also lost their summer hue, so that every variety of tint was visible. These contrasted with the dark green of the graceful spruce, pine and hemlock, which crown the mountains and surround the crystal lakes and ponds, present a scene equalled in beauty only by the gorgeousness of a New England autumnal sunset.

But Time tarries not. The eye cannot always rest upon the beautiful, and terrestrial pleasures are, at best, but transitory; so after three days,

I left behind my native hills,
With all their varied hues,—
The crystal streams, the dancing rills,
And the beauteous mountain views.

I soon lost sight of the mountains, and of the delightful scenery around them; but the picture is deeply engraved on the mind, and in reviewing it the finger of a Divinity is visible in every hue, and wilfully blind is he who cannot see it.

L. VARNEY.

Providence, 10 Mo. 25th, 1852.

N. H. STATE AGRICULTURAL SOCIETY.

The New Hampshire State Fair was held at Meredith, on Wednesday and Thursday, Oct. 6 and 7.

From our correspondent's account, the Show was a very creditable one, and the attendance very large. It rained, he says, "by fits and starts," all day on Wednesday, but nevertheless, 1500 dollar badges were sold, and quite a number of single tickets. The grounds were very favorable for the exhibition, and great pains were taken by the inhabitants of Meredith Bridge to accommodate the visitors. The useful articles greatly outnumbered the fancy and tasteful ones, as it was becoming they should, though in the ornamental department the Fair is said to have been very good. Our correspondent particularizes some carriages, which would have done no discredit to a Boston Fair. The stock of cattle was regarded as uncommonly fine. There were many pairs of fine working oxen and a large number of superior milch cows of improved breeds and others, and a goodly number of very superior sheep. There were numbers of superior horses, Blackhaws and Morgans, &c. Some aldermanic swine, and quite a fair exhibition of fowls. And what, perhaps, is yet better worth noting, the show of fruits, such as apples, pears, peaches, grapes and plums, as well as of vegetables, was very large and fine. Take it all in all, it is pronounced by one who visited the Vermont Fair at Rutland—and who himself is a good judge of such matters—to have been superior to that in every thing but horses and sheep.

On the evening of Wednesday, there was a spirited meeting of the farmers held in one of the meeting-houses of the village, at which remarks were made by Mr. Nesmith, the President of the Society; Messrs. Glidden, of Unity; Eastman, of Conway; Sawyer, of Piermont; J. M. Whiton, of Boston; Ex-Gov. Steele of Peterboro'; and Dr. Woodbury, of Bradford.

On Thursday a public address was delivered by W. S. King, Esq., of Rhode Island; in which the popular prejudices against "book farming" were very successfully combated.

At the close of this address, Gen. Pierce was introduced, and made a brief but very felicitous speech to the farmers, closing with the hope that "the smile of the Great Spirit" [the Indian name for the beautiful lake on the borders of which this meeting was held] might never rest on a population less contented or less prosperous than that which was now before him. The speech was received with much applause.

For the New England Farmer.

GOV. ENDICOTT AN HORTICULTURIST.

BY S. P. FOWLER.

(Continued from page 449.)

Mr. Higginson, in 1629, wrote a pamphlet entitled "New England's Plantation. Or a Short and True Description of the Commodities, and Discommodities of that Country." In describing the natural productions of the soil, around Nahumkeag, he says, "Excellent vines are here, up and down in the woods. Our Governor hath already planted a vineyard, with great hope of increase." Tradition says, that Gov. Endicott entered largely into the cultivation of the native grape, for the purpose of making wine, but with what success, we are unable to say. These vines were planted at his orchard farm, and extended from his mansion house, in two lines, to the banks of the river. It is a singular fact, that the early discoverers and settlers of this country entertained sanguine hopes of being able successfully to cultivate our native grapes, and furnish wine for exportation. We find in the records of the Massachusetts Company, a memorandum of articles to be sent over from England, for the use of the Plantation at Nahumkeag. Amongst these were "Ministers. Men skillful in making of pitch, and of salt, and *Vine-Planters*." In the London Company's first general letter of instructions to Endicott, and his council, under date of 17th of April, 1629, we find the following. "We take notice that you desire to have Frenchmen sent you, that you might be experienced in making of salt, and *planting of vines*. We have inquired diligently for such, but cannot meet with any of that nation. Nevertheless, God has not left us altogether unprovided of a man, able to undertake that worke; for that we have entertained Mr. Thomas Graves, a man commended to us, as well for his honesty, as skill in many things very useful." In a letter, sent home from "New-England, by Master Graves Engineer, now the resident," we find in a glowing account of the fruitfulness of the country the following:—

"Vines do grow here plentifully, laden with the biggest grapes that I ever saw; some I have seen four inches about. So that I am bold to say of this country, as it is commonly said in Germany, of Hungaria, that for cattle, corn, and *wine* it excelleth." These grapes were exceedingly large, nearly the size of the imperial gage plum. Our largest native grapes are about three inches in circumference.

Rev. Mr. Hubbard, in his History of New England, written about the year 1680, when describing the fertility of the soil, and its vegetable pro-

ductions, says, "That great hopes of fruitfull vineyards was entertained in after time; but as yet either skill is wanting, to cultivate and order the roots of those wild vines, and reduce them to a pleasant sweetnesse, or time is not yet to be spared, to looke after the culture of such fruits, as rather tend to the *bene* or *melius esse*, of a place, then to the bare *esse* and substance thereof." Alas, the climate of New-England forbids these fond anticipations of the Puritans from ever being realized by us. The subject in regard to the propriety of cultivating the Tobacco, early engaged the attention of the planters at Nahumkeag, as well as the Company in England. In their first and second general letters of instruction to Endicott and his council, they say, "The planting of tobacco is by this whole company generally disavowed, and utterly disclaimed, by some of the greatest adventurers amongst us, who absolutely declared themselves unwilling to have any hand in this plantation, if we cherish or permit the planting thereof. And we especially desire that no tobacco be planted, by any of the new planters, under your government, unless it be some small quantity for mere necessity, and for physick, and for the preservation of their healths; and that the same be *taken privately by ancient men*, and none other." In this manner, and with very great caution, was tobacco first introduced into Massachusetts.

There was likewise a law in New-England, in the year 1634, "That no person should be permitted publicly to use tobacco, on fine of 2s. 6d., or privately in his own dwelling, or dwelling of another, before strangers; and they also forbid two or more, to use it, in any place together." In Winslow's Relation, we find that the Indians were accustomed to take much tobacco; but for their boys so to do, they account it odious. The idea that tobacco, like rum, should be used only by persons of suitable age, and taken moderately, was not confined to the Puritans. We well remember when a lad, being present when rum was used, or tobacco taken, being told that we were not old enough to use it, and must wait until we became men.—And it was not uncommon in those days, for very polite men, who chewed tobacco, to turn their backs, or put one hand to their mouths, to conceal the act of taking a quid. But we have noticed, that such modest and polite men, at the present day, are exceedingly rare, indeed we do not recollect to have seen one for many years. They must, we think, much to our regret, have all passed away. The quiet, sober, and secret way, tobacco was taken by the Pilgrims, is in strange contrast with its use, at the present day. Many amusing anecdotes are connected with its early use and history.

The Rev. Mr. Ersking, the author of the Gospel Sonnets, wrote a religious doggerel, wherein he supposed the smoking of tobacco a proper subject for religious meditation. It was addressed to smokers, and called upon them to spiritualize smoking. It was written in 1770. The first stanzas are as follows:—

The Indian weed, now withered quite,
Though green at noon, cut down at night,
Shows thy decay;
All flesh is hay,
Thus think, and smoke tobacco.
Doth juice medicinal proceed,
From such a naughty foreign weed;
Then what's the power
Of Jesse's flower,
Thus think and smoke tobacco.

The superior benefits, Capt. John Underhill supposed himself to have derived from what he is pleased to call "The good creature tobacco," is amusing—Mistress Wilbore was dealt with, for coming to a lecture in Boston, where Master Shepherd expounded, and wearing a pair of gloves slit at the thumbs and fingers, for the purpose of taking snuff, as was supposed. Master Cotton observed, for what purpose, should those vain openings be, but for the intent of taking snuff! And he began to quote Gregory Nazianzen upon good works.

The culture of tobacco by the planters early engaged their attention, and notwithstanding its prohibition by the London Company, many were anxious to cultivate it, at Nahunkeag. Gov. Endicott and some of his company opposed its cultivation, on the ground of its being highly injurious to the health and morals of the planters. This decision is the more remarkable, when we consider the great and marvelous properties it was supposed at that time to possess. Josselyn, in his "Account of Two Voyages to New-England," when speaking of the tobacco, says, "Its virtues are these, it helps digestion, the Gout, the Tooth-Ach, prevents infection by scents, it heats the cold, and cools them that sweats, *feedeth the hungry*, spent spirits restoreth, purgeth the stomach, killeth nits and lice, healeth green wounds, the Syrup is good for many diseases, the Smoak for Phthisic, and all diseases of a cold and moist cause, good for all bodies cold and moist, taken upon an empty stomach." Considerable attention has been paid to the cultivation of tobacco, of late years, in Massachusetts. The variety produced is called the Connecticut seedleaf. The quantity raised on the acre is larger than it is in the tobacco growing States, and it usually brings double the price of that grown in Virginia or Kentucky. The yield is from fifteen hundred to two thousand pounds per acre, at an average price of eight cents per pound. The crop, it is said, does not injure the soil, and it is found that wheat and other grain and grass flourish better, where tobacco forms a part of the rotation, than where it does not.—An instance is mentioned, where thirty-six dollars' worth of manure was put upon an acre and one hundred rods of land, which was planted with tobacco. This raised a ton of tobacco, worth one hundred and sixty dollars. The land was then sowed to wheat, and reaped thirty bushels.

The next crop was hay, which gave at two cuttings four tons. The reader must, we think, have perceived of late, that our hold upon Gov. Endicott as an Horticulturist has been rather slight. And we are hereby admonished to close this communication, before we are again tempted to wander back to those interesting scenes and events that are recorded on the early pages of our country's history. In taking leave of Gov. Endicott, as a cultivator of the soil, we will quote the language of Dr. Bently, who says, "Posterity has fully approved the choice of Governor Endicott, and more circumstances distinguish the grounds on which he planted, than are recollected respecting any of the leaders of the Pilgrims." The death of this worthy and energetic man was tranquil and easy, and took place at Boston, on the 15th of March, 1665, he being seventy-seven years of age.

Tradition says, he was buried in the King's Chapel Burying-Ground. But the precise spot is

not now known. His tomb stone was standing at the commencement of the Revolutionary war, when it was destroyed, with many others, by the British soldiers, when they occupied Boston.

Danversport, Sept., 1852.

S. P. F.

CONCORD FARMER'S CLUB.

SUBJECT—*Rearing, Feeding and Fattening Swine.*

Mr. WM. D. BROWN said, that when we consider that the richer the food the stronger will be the waste matter, it will be seen from what the hog eats that his manure must be a powerful stimulant. So it is. It gives us the deep green corn in June. It is particularly well suited to dig in about fruit trees, being so fine. But notwithstanding the valuable qualities of this concentrated manure, it is more generally wasted than any other. The yard is usually open to the blazing sun, the drenching rains and free winds of heaven. It is true that nothing can ever be wholly lost, but these wasting agencies transfer very rapidly the strength of the exposed deposit, to the absorbing atmosphere. It is said of Bonaparte, that he invariably selected men for offices requiring great skill and wisdom, who had large noses! Happy and wise is he whose nose is large enough, and sensitive enough, to guide him in making such arrangement as will save his own wealth, and permit his neighbor to breathe air not corrupted. I believe the hog to be an indoor animal; entitled to agreeable food, and the whole of his tail! Treat him liberally, and whenever you need, he will, with a little justifiable complaint, yield up his life to you with a handsome profit.

Mr. J. P. BROWN said that some years ago he made an estimate of the cost of keeping a certain number of hogs. The result was, that year, he had *ninety dollars and the manure more than the cost of keeping*. In using \$125 worth of feed on four hogs he had received a profit of *fifty-eight dollars and seventy-five cents*. He gave the items to show this profit. He thought it profitable for most families to keep one or more hogs. Many other excellent remarks were made which we had not opportunity to report.

The opinion greatly prevailed with those present, and many farmers of experience were present, that it is profitable for farmers to rear and fat swine for the market even in Middlesex county.

Subject for discussion next week—Is the raising of poultry profitable? Leaders in the discussion, C. A. Hubbard, J. P. Brown, J. B. Farmer, C. W. Goodnow. Place of meeting, Jacob B. FARMERS.

AMERICAN POMOLOGICAL SOCIETY.—A copy of the Transactions of the Second Session of the American Pomological Society, held in Philadelphia, on the 13th and 14th of September, 1852, has been presented us by the Hon. MARSHALL P. WILDER, President of the Society. The biennial deliberations of the most skilful fruit culturists in the

country must have an important influence in regulating the nomenclature of fruits, and in deciding on their various merits. The work contains many valuable pages from which we may hereafter draw for our columns. The next meeting of the Society is to be holden at Boston in 1854.

HAMPSHIRE AGRICULTURAL SOCIETY.

We compile from the *Amherst Express* the following account of the annual Exhibition of this Society, on Wednesday, October 27.

Wednesday opened most auspiciously, the atmosphere was cool and bracing, and the weather delightful as could be expected in these drear autumnal days, when the heats of summer are cooling down before the frosts of approaching winter. The Cattle Show of the Hampshire Agricultural Society, taken as a whole, surpassed anything heretofore exhibited in this town. Although some departments may have been less full than on previous occasions, yet in others the display was of a quality more than sufficient to make up any deficiency. The Show of Cattle, although not as large as it has heretofore been, was still far above that of any other Society, in the State, we have yet noticed. Eastern Hampshire always turns out, in full, in this sterling element of Cattle Show, and this year she still maintains her superiority, notwithstanding the circumstances which have combined to greatly reduce the number of cattle on our farms.

STOCK ON THE COMMON.—The whole number of neat Cattle on the ground was 400. There were four strings of Working Oxen, many of them fine animals, yet they would have shown to better advantage if some of the smaller yokes had been minus. Leverett turned out 68 pair, drawing a car containing a band of music. Hadley and Granby were each represented by 35 yokes, the latter drawing a car upon which was an American flag, dressed in mourning, in honor of Mr. Webster. From Pelham there were 10 yokes present.

Fat Cattle were not numerous, but those presented were of superior quality. Of Bulls, Cows, Calves, Sheep, Swine, &c., there was a good display, pork, in particular, being well represented, the grunTERS and squealers attracting their full share of attention.

HORSES.—Many fine animals were exhibited, although the entries were less numerous than on former occasions.

PLOWING MATCH.—There were sixteen competitors, and the nicety of the work, depth of furrow, and rapidity of execution, together with the different instruments used, attracted the attention of a large concourse.

SWEETSER'S HALL.—Here was the finest display of fruit we remember ever to have seen. Although rather late in the season for many specimens of summer fruit, yet, in the article of apples, there was a splendid display. Four long tables, extending the length of the Hall, and one across the end, contained 658 plates of fruit, and few, if any, of our older coteremporaries can present a better display.

PHENIX HALL.—Here were displayed vegetables, grains, mechanic arts, butter, cheese, bread, &c. The first point of attraction on entering the hall was the splendid array of butter. It seemed as if

the ladies vied with each other in bringing in the largest and best specimens from their dairies.

Vegetables seem to have been growing this year on purpose to see which would get to be the biggest by Cattle Show time. The display of monstrous vegetables was much larger than usual. Although it may be gratifying to behold these monstrosities, yet they are not, as a general thing, of equal utility with smaller and more medium growths.

THE ADDRESS from W. C. GOLDTHWAIT, A. M., Principal of Westfield Academy, was a capital thing, just suited to the occasion, plain, practical, comprehensive, within the understanding of all, and full of useful information.

Mr. GOLDTHWAIT commenced by alluding in a very felicitous manner to the wealth of farming, in which he gave statistics showing it to be far the most profitable of any employment. His subject was "Agriculture as susceptible of Improvement." This was obvious from the great improvement witnessed within the last fifty years, as can be seen in our larger crops, better stock, and improved lands. In other parts of the world there had been still greater advances. While Massachusetts supports a population of 87 to the square mile, England subsists over 200. He then enumerated the particular points in which our farming was capable of improvement. Draining was yet in its infancy among us. In manures we were far behind other countries. He illustrated these by allusions to what had been done in other parts of the world, where on single estates there were 700 miles of drains, and manures, reduced to a liquid state were showered, by means of machinery upon the fields. Another matter where improvement could be made was in the cultivation of less land, which could be better treated. In France, where the landed property is divided between each generation, the average size of farms was 15 acres, and there were 1,500,000 farms averaging only 5 acres, and yet this country had been greatly growing in wealth. The soil must be better prepared for the seed. Plowing is the most important operation on the farm. It is necessary that the ground should be properly pulverized, and in this connection he spoke of subsoil plowing: of the necessity of stirring the soil to a sufficient depth, for the roots of plants, so that the strength of the plant need not be exhausted in boring a passage for its roots through the plow floor. The roots of corn descend six feet; clover two; grain from two to three. Subsoil plowing has doubled crops without additional manure.

In some parts of Europe they have spade husbandry, which consists in throwing up the soil with a fork, having tines 14 inches long. In France 40,000 acres are cultivated in this way. In this connection he again alluded to draining, and spoke also of manures. He then went on to show how farmers could improve their agriculture by improving themselves. They ought each to have a workshop and know how to use it. They should be coopers enough to put a new hoop on the vinegar barrel, and dentists enough to insert a new tooth in the rake head. Learn how to do every thing. Chemistry is important to the farmer and he should not forget books. Cultivate the soil and the mind. He then enumerated some of the advantages of the farmers life, and closed with a beautiful tribute to the ladies, farmer's wives and daughters.

After the dinner Mr. ALFRED BAKER, President of the Society, then made a statement of the present condition of the Society. The funds had been increased since last year \$700, and now amount to \$3,200, and the number of members was 700; of which 250 had been added during the year, and of these 200 were ladies. Being desirous of raising the funds of the Society to the limit prescribed by the legislature, on which bounty would be paid, and having called pretty generally upon the gentlemen, an appeal was made to the ladies. They had responded with their characteristic generosity, and the names of some 200 ladies were now enrolled as life members of the Society, and more than the needed amount had been promptly raised.

Speeches were made at the table by Hon. EDWARD DICKINSON, Hon. AMASA WALKER, Secretary of the commonwealth, Dr. REED of Pittsfield, and President Hitchcock, and altogether, we should judge the Hampshireites had a most agreeable and profitable meeting. May they have many more.

For the New England Farmer.

VALUE OF BIRDS.

FRIEND BROWN:—I will relate to you an occurrence that took place in the year 1851, on my farm, that shows the value of birds, viz:—I went to mowing in one of my fields, and found that the grasshoppers were very plenty but not fully grown, and remarked to my son, who was mowing with me, that if they were not destroyed there would be enough to eat up all the fall feed. But as soon as we had mowed a few swaths, there were three blackbirds came and went to work, and before noon there were more than 50 blackbirds and bobolinks on the piece; the next day when we took away the hay the grasshoppers were few and far between. The following day we went to another field at some distance where the grasshoppers were the same, and the birds followed until their number increased to more than 200, and when we were done haying they had made a clean sweep, with the assistance of a few of the crow blackbirds that appeared to come a great distance; they were coming and going always in the same direction and very high in the air. I will just remark that when I was a boy my father said we might kill all those kinds of birds, because, as he said, they did mischief.

I once knew crow blackbirds to pull up corn, and but once.

Yours, &c.,

B. F. CUTLER.

Pelham, N. H., Nov. 6, 1852.

A SEASONABLE HINT.—Suet and lard keep better in tin, than in earthen ware. We have vessels made with covers and handles, which will contain about fifteen pounds each, five of them for a dollar. With careful usage they will last an age. Lard kept in earthen pots, penetrates the pores so that the outer surface is soon covered, and in hot weather so much will pass through as sometimes to run off upon the shelves. Now is the time to get the tin cans; once tried you will never go back to the earthen pots, either as a matter of convenience or economy.

AGRICULTURAL IMPLEMENTS.

During the last half century, no subject has more engaged the attention of thinking, practical men, than the improvement of machinery. Under this general head may be properly classed all the implements of farm husbandry. In our country, more perhaps than in all the world beside, has this spirit of improvement, this constant striving for something better, wrought out results useful to man. Our government and institutions are well calculated for the development of individual genius and enterprise; and to this individual thinking and acting, may be referred the glorious results which have been attained.

Genius is not pent up by arbitrary rules, edicts or censorships, to break out here and there like an impetuous torrent, but finds vent in all directions, and thus every department of industry is benefited: It is seen in works of art, where great natural obstacles are to be overcome. Combined with wealth, it spans rivers whose perpendicular sides and deep abyss have mocked the daring and skill of former ages, or bids the mountain yield a passage through its rocky bosom. The old machinery, both of sea and land, stands back mute and motionless, in astonishment at the modern queer ways of grinding, reaping, threshing, pumping, pulling and wheeling, and all manner of locomotion.

Man's inventive genius never tires—the inventions of one only exciting the genius of another to supply a defect or add an improvement. It is this stimulus which has brought the steam-engine to its wonderful state of perfection, and produced similar results with other machinery—with our reapers, plows, harrows, and most of the implements of the farm.

The quality of any work, in whatever art, depends mainly on the tools with which it is wrought. The most skillful shoe-maker, with a superior piece of leather, cannot make a good boot, unless he have a good awl, good thread, and a good knife; and the ship-builder not only needs the right kind of timber, but the right kind of tools. It is so in every art. In farming, good land will avail but little with a plow that does its work in an imperfect manner, and the farmer would find that he was far behind his neighbors both in quality of work and time, if he was without a harrow, or if he should use the flail or horse's hoof, instead of the threshing machine, upon large quantities of grain.

If his plow turns the furrow, so as to preclude the atmospheric influences, or breaks it into disjointed masses, his crop is materially affected by it. The whole action of the plow depends upon a shaping so precise, that a very accustomed eye cannot ascertain without trial whether a plow is rightly turned or not. Again, the operation of the plow depends upon the kind of soil to be turned.

The heavy plows made for the strong and hard soils of New England, might prove of little use on the mellow vegetable mould, that constitutes the prairies of the West. In Massachusetts, many of the farms are so small that the sickle and flail may still be used; while in Illinois, Iowa, or Missouri, the use of either would be looked upon as strange, and excite as much wonder, as would Noah's ark, with its inhabitants, drifting into the harbor of Chicago, or working up stream, against the current of the Mississippi, into the port of St. Louis.

The plow is the implement of the most importance on the farm; and the improvements made in this article, within a few years, especially in the draft and in the adaptation for sub-soiling, must produce great and beneficial results in this State, which will show a new and more smiling face on our ancient mother, in the latter half of this century.

It is but a short time since the discovery was made that large portions of our best and most fertile lands were neglected and unproductive. Experiments were made on a small scale, to reclaim meadow lands, in the Irish fashion, with the hoe; then the common plow was introduced, but both proved inadequate to the labor. It was found that the cost of subduing in this manner was so great, that few proceeded in the attempt. But enough was accomplished to reveal the fertility of these lands, and to excite an inquiry how they could be reclaimed at a remunerating cost. Methods were soon devised not only to plow meadows that were hard, but those inaccessible to the team on account of their softness. The pulley, rackets, and meadow plow with double share, have added some millions in value to our New England soils. This plow cuts the entire surface of the furrow, from the subjacent soil, and enables the mould board, with the aid of the plowman's foot, entirely to reverse it. From the elasticity of the meadow sward, filled as it usually is with innumerable roots, no other implement has been found equal to the meadow plow, in the work of reclaiming our meadow lands.

For the New England Farmer.

SHANGHAI FOWLS ON THE RISE.

I see it stated in the *Woonsocket* (R. I.) *Patriot*, that E. G. Faxon, of this town, has lately disposed of a pair of Shanghai fowls, for the clever sum of one hundred dollars. Possessing a personal acquaintance with the Editor of the *Patriot*, from whose pen the statement seems to appear, I am not disposed to doubt the truth of the same. E. G. F. keeps some very choice fowls—and his Shanghais are certainly perfect specimens of what G. P. Burnham, of Boston, calls the most beautiful of all domestic birds. Some people will see beauties where others cannot.

Now, I would ask why it is, that these Shanghai fowls occasionally bring such enormous prices? And as I have asked the question, I will also take

the liberty to answer it according to my opinion. It is because purchasers do not know them. A friend of mine called a few days ago on a fowl fancier, who had just disposed of five pairs of Shanghai fowls for \$40,00; and when asked by my friend if he really considered them superior to our common fowls, he replied that he did not; and such would be the reply of hundreds of others, if asked the same question. I think our native breeds of fowls have been shamefully treated, (a.) and I hope the time is soon coming when they will be restored to their former standing—a place they so justly merit.

A. T.

Smithfield, R. I., Nov. 10th, 1852.

REMARKS.—(a.) So do we, friend "T.," and that is the reason they have lost caste. If they were treated as well as the foreigners which have been introduced, they would repay all kindness and leave a balance for profit.

For the New England Farmer.

EXHAUSTING THE LAND.

BY A. G. COMINGS.

There is a great deal of talking among some farmers as though something might be made out of nothing, in the laboratory of nature. They declaim against exhausting crops, and even exhausting manures, as though there was much trouble and little understanding in the matter of using and keeping the soil.

Every crop is an exhausting crop; but in one case the exhaustion may be perceptible, while in another it may not. If a farmer sows or plants for a particular crop where the soil contains a great abundance of the properties which must be taken up by a growing crop of that kind, he will be likely to get a very large crop. If so, the soil will be exhausted to the full amount of what the crop has taken from it. Yet the exhaustion will not be perceptible, because there still remains a sufficiency of those properties for producing other crops. But if the soil is almost entirely deprived of certain very necessary properties, by the growing of one crop of a particular kind, that crop, under such circumstances, would be condemned as an exhausting crop. So it must be in the whole course of agricultural practice.

If twenty persons were to sit down to dine at a table supplied with a great variety of what people generally eat, and yet those persons all live entirely on bread, the supply of bread would be very soon exhausted, and the company might starve. So it is with the feeding of plants. The soil of a particular locality may be found but moderately supplied with certain properties, and the very crop which would take those properties all away is required from the soil. Now the crop is not to be blamed. It must "eat to live," and it must eat what it needs, as men do who would live in health.

It is impossible for us to raise a crop, of any kind, without exhausting the soil. The greater the crop the more the soil must be exhausted. If we use anything to make the substance of the soil more active, the consequence must be the exhaustion of the soil; unless plants can grow out of nothing, as well as out of good soil.

A neighbor solicited a little advice concerning the use of certain lands. I advised him to apply

some quantity of lime. The answer was, "Lime exhausts my land."

Why did it exhaust the land? It was applied so as to make the soil very active, or, which is about the same, it hastened the vegetable matter of the soil to such a state as to be taken up by the growing plants.

Another man inquires concerning a piece of land, and I advise him to apply all the ashes he can save, because it is evident that the soil has not a proper supply of potash. But he tells me that he used ashes on a piece of ground some years ago, and believes that it exhausted the soil. The fact undoubtedly was, that he applied ashes in sufficient quantity to quicken the action of the soil, obtained a good crop, and the crop exhausted the soil. The ashes did no mischief.

"I don't like guano," says another, "for I find that it exhausts the soil." What is the matter now? Why, the man has used a little guano upon an almost ruined soil, just enough to stimulate it, and obtained an extra crop. But the next year the soil appears poorer than ever. So we hear the complaint about guano, that it exhausts the soil. The truth is, however, that there is no just cause of complaint in the case. Not enough guano had been used in the case to enrich the soil, nor even to sustain it, under the year's cropping, and as a larger crop was taken off by the addition of a very little, the soil was of course exhausted. In the use of guano I am quite of the opinion that it may be most profitably applied in the hill for our planting grounds, when unfermented manure is spread upon the land. There is, to me, no doubt at all of the great profit of such a use of guano. But a light manuring with guano, upon an almost worn-out soil, will bring the remaining properties of the soil into use, and a single crop may take them up. If so, that crop must exhaust the soil. This is the state of the case with much of the land that is said to have been injured by lime, ashes, and guano.

Every crop exhausts the soil, and the larger the crop the more the soil is exhausted. All kinds of crops are not alike as to power to exhaust the soil.

Some of the French agricultural chemists have maintained that a crop of clover would not exhaust the soil. There is little doubt that the clover plant is an excellent agricultural chemist, and will do much to supply what it takes away from the soil. But there are some mineral properties in clover which must be derived from the soil. When these properties are taken up in any quantities the soil is so far exhausted.

The great inquiry of some people for non-exhausting kinds of grain is about as sensible as an inquiry would be for a kind of animal which could live without eating.

The great matter to the farmer is to produce exhausting and yet profitable crops, and at the same time know how to keep up his land. The most exhausting crops are generally the most profitable for him to raise.

It would be of the greatest consequence to the farmers of New England to know in what properties our soils were generally most wanting, and then what of our common crops will most exhaust the soil of those properties. It is certain that a very large portion of the land of New England is now greatly destitute of vegetable and mineral strength for producing the most valuable crops so as to be profitable. Profitable farming must hence-

forth be that which tends to reclaim the soil, while year after year taking profitable crops from it. Year after year has diminished the power of the soil for producing profitable crops, while many millions of dollars lie buried in swamps, within New England, which one-quarter of the hardihood and perseverance necessary to success in gold-digging in California would bring into use. It is very poor policy for farmers to avoid every outlay for working up the "raw material" which they have on hand in the shape of swamp muck, &c. They have the material for reclaiming the worn soils of New England mostly upon their farms. Why not use them, and cease to inquire so much for non-exhausting crops? Every acre of land should be put in such a state that the cultivation of it must give a good profit to the cultivator. It is all idle to think that every dollar spent for lime, salt, plaster or guano, for use upon the land, is extravagance. And while the great body of farmers will laugh at a man who digs out muck, and complain that their farms are worn-out, it is no wonder that "the boys" seek some other way to make money, than working the worn lands which their ignorant fathers have been practicing robbery upon all their life time. If any of the farmers' boys want to dig a little gold, I would advise them to begin at the muck swamp nearest their dwelling. c.

Mason, N. H.

For the New England Farmer.

PAINT AND WHITEWASH.

The remarks of one of your correspondents in regard to white painted houses in the country, reminds me of our friend Bishop — from the South, on a visit at our country seat some years since, after admiring the stately forest trees and complimenting us on the neat appearance of the grounds, sagely remarked, looking at some grave looking rocks which had been left as mementoes of what the place had once been, "One thing you have to do, get your rocks whitewashed." Our friend liked a cheerful color.

This was some eight years ago. Since that time some advance has been made in cultivating rural tastes, and the day of white houses, whitewashed fences, whitewashed trees, and such staring disfigurements of nature's beauties, has nearly gone by, except, with those who, thinking what always has been must be right, maintain their own opinions against any new-fangled notions.

Your correspondent who has lived 30 years in a red house suits me a shade better. But why paint his house at all? Is it not a far more agreeable object, to behold one of our old weather-washed farm houses shaded by a graceful elm, than one with enough of this durable red paint sticking to it to remind one of a tannery?

For my part I like nature in the country, nor do I believe we can eclipse her with either paint or whitewash. Our wealthy cit gets his country seat, and the first thing he does, if he has money to spare, (or if he has not, for other purposes) is to cut down a graceful natural hedge of sweet briar, barberry or privet, perhaps a fine tree, to make room for an expensive wall, well plastered and capped; turning our grateful shaded lane into a glaring street. True, the stonework, at first glance, excites the admiration of some and the notice of all. But is it really an improvement on unmolested nature? Walls and fences in their

places must be had, they are necessary evils; but are they not better concealed than forced into our vision to the exclusion of more agreeable objects.

Though there is no accounting for tastes, they undoubtedly can be cultivated and improved; and we thought so the other day when we saw our neighbor from the West, building on a lot lately cleared of every vestige of a tree, intending to take down the old house shaded by tall buttonwoods. On our remonstrating with him on his barbarism, he replied, "When I am in a cleared country, I don't like to live in the woods!"

If our cheerfully disposed friends would venture to try some modest, unattractive color (if they wish one suggested, let them imitate the old unpainted farm house) and should they at the end of the year find it did not suit the complexion of their feelings, and that they were disposed to be gloomy, then we must refer them to the new discoveries of the Jersey Man. Comp. of White Zinc Paint, while we shall be content to keep in the shade and thereby save our dull eyes.

I intended to have said a word to your Newton correspondent about plums, but fear I have trespassed on your columns. After trying salt, salt mud, parging, syringing, et cet., on two dozen trees for ten years without success, for the last two years we have scattered lime over the trees, covering some of the plums entirely. Last year we saved half a bushel.

I saw last autumn a piece of cotton that had been placed around an elm tree, filled with thousands of insects, many of them alive. This without doubt is the most effectual plan for preventing the ravages of the canker worm. J. H., of the market, has a plan of putting a roll of cotton batting around the trunk of the tree. He finds it filled with the eggs of the insect. By this method he has saved most of the fruit on a Bulmar Washington. S. W.

Brookline, Oct.

"ONE" OF THE NEW HAMPSHIRE GIRLS.

A correspondent of the *Journal* relates the following:—

"While on a visit to my friends in New Hampshire the past week, I had the pleasure of an introduction to Miss Rosina Delight Richardson, the only daughter of Mr. Nathaniel and Mrs. Mary Richardson, (of East Alstead, Cheshire county, N. H.) Miss Rosina is nineteen years of age, is 5 feet 3 1-4 inches in height, measures 5 feet 4 1-2 inches around the waist, (6 feet 2 inches around the hips,) 22 inches around the arm, above the elbow, 14 inches around the arm below the elbow, and 2 feet 10 inches in a straight line across the shoulders. At birth she weighed 6 pounds, at 5 years 148 pounds, at 15 years 365 lbs., and now, at 19 years of age, she weighs 478 lbs. On estimating the quantity of cloth in her clothing when dressed for a ride on a winter's day, we found it to contain 98 1-2 yards of 3-4 yard wide cloth.

"She has brown hair, dark blue eyes, is of fair complexion, and has what phrenologists would call a well-balanced head, the perceptive organs predominating. She can knit, spin, weave, make a shirt, or a batch of bread, is a good singer, and plays the piano with taste and skill—is considered one of the best scholars in the town where she resides—courteous and affable, and lively in con-

versation, and evinces a general knowledge which might raise a blush on the cheek of some of our city belles."

WINTERING CATTLE AND HORSES.

Owing to the great drought the past summer, in many parts of the country, winter feed will be exceedingly scarce, and the most rigid economy will be necessary to enable many farmers to carry their ordinary stock through the winter. What is the cheapest method of wintering cattle, sheep and horses? always an interesting question, becomes now a most important one; and though we by no means pretend arbitrarily to answer it, yet we will endeavor to throw out a few hints that may be useful. We would premise that no particular method can be laid down, that will be applicable to all cases; the climate, locality, nature of the crops grown, and prices obtained for them, interfere with any such calculations. A more serious drawback, however, is the deplorable ignorance of us all on the subject of nutrition; for were the principles of nutrition well understood, it would be easy to alter our modes of feeding to suit circumstances, and so keep the animals in the best and most economical manner.

Different breeds of animals doubtless require different amounts of food; yet, as a general rule, it may be stated that animals require an amount of food in proportion to their weight. That is to say, an animal weighing 1200 lbs. would require twice the amount of food per week as one weighing 600 lbs., other things being equal. (a.) More food, too, is required in cold than in temperate weather—more when the animal is worked than when doing nothing. Also, cows giving milk or when in calf, and young animals, require more than an animal of the same weight in a perfectly normal state. If, too, we wish an animal to lay on fat, we must give more food—or rather the same quantity or bulk of food, but of a more nutritious quality—than would be necessary to keep it in a normal condition, or without increasing or decreasing in weight.

The amount of food necessary per week to keep an animal in a normal condition under the most favorable conditions of warmth, is not accurately ascertained. The amount of food, however, which animals eat when given *ad libitum*, depends to a great extent on the per centage of available non-nitrogenous substances it contains, and not on the nitrogenous. (b.) Thus, an animal fed on oilcake, peas or beans, and clover hay, will eat nearly three times as much nitrogen as when fed with corn meal, hay, &c., though it is probable that the amount of available non-nitrogenous substances eaten is pretty much the same in either case. The advantage, therefore, in feeding a highly nitrogenous substance, is not in the less amount required by the animal, but in the increased value of the manure and the increased quantity of fat a given amount of non-nitrogenous food will produce, when eaten in conjunction with nitrogenous substances. We are, however, by no means to suppose that the rate of increase is in exact proportion to the per centage of nitrogen in the food, for it is not; rapidity of increase being attained only at an increased proportional consumption of nitrogenous substances.

By available non-nitrogenous substances, we mean such substances as sugar, starch, oil, gum,

&c., which are readily dissolved in the stomach, and easily assimilated; and not such substances as woody fibre, which, though a non-nitrogenous substance, and composed precisely of the same elements as sugar, &c., is not available as food, being incapable of solution in the stomach, and is passed through the body of the animal unchanged.

In providing our store stock with food, especially in a season of scarcity, our object will be to give them a sufficient amount of available non-nitrogenous substances in the least expensive form. That is, leaving out every other relative question, such as value of manure and increase of animal, and aiming only at keeping the animals in a normal condition without work, we should prefer those foods, the price being the same, which contain the most sugar, starch, &c., supplying the necessary bulk with some cheap substance, such as straw.

The prices of some of the substances used as food for cattle, taking Rochester wholesale prices as the basis of calculation, will be an indication of the value practical farmers put upon them. We give the price per ton; for it is weight, and not bulk, that we desire in purchasing food, or in estimating its value.

Bran, at 7 cts. $\frac{1}{2}$ bushel of 40 lbs.	\$14.00 $\frac{1}{2}$ ton.
Shorts, at 9 cts. $\frac{1}{2}$ bushel of 14 lbs.	12.86 "
Coarse middlings, at 14 cts. $\frac{1}{2}$ bushel of 20 lbs.	14.00 "
Fine " " at 20 cts. $\frac{1}{2}$ bushel of 27 lbs.	14.07 "
" " " at 30 cts. $\frac{1}{2}$ bushel of 34 lbs.	17.64 "
Indian corn, at 60 cts. $\frac{1}{2}$ bushel of 60 lbs.	30.00 "
Oats, at 38 cts. $\frac{1}{2}$ bushel of 33 lbs.	23.75 "
Oilcake.	30.00 " (c)

Had we complete analyses of these substances, it would be easy to decide accurately which would be the cheapest food for the purpose. We have no doubt, however, that Indian corn contains much the most available non-nitrogenous matter, and that 100 lbs. of ground corn meal mixed with the required bulk of cut straw, will be of more avail in sustaining animal life during the winter than any other food that can be obtained at the same price. We have no doubt, too, that horses can be kept in the same way, at a much less cost than feeding them on hay. If, however, they be worked much during winter, they would require a more nitrogenous food, to supply the wear and tear of muscles, and a little oilcake meal, pea meal, or oat meal, might be mixed with the cut straw, &c.—instead of, or in addition to the corn meal—with advantage.

BOUSSINGAULT estimates, from experiments and chemical analyses, that 100 lbs. of good meadow hay may be replaced by

Bran.	85 lbs.	Peas.	37 lbs.
Oats.	68 "	Potatoes.	280 "
Barley.	65 "	Carrot.	382 "
Maize.	59 "	Wheat straw.	495 "
Rye.	77 "	Oat straw.	363 "
Linseed cake.	22 "	Barley straw.	460 "
Beans.	23 "	Pea straw.	64 "

If this table of equivalents can be relied upon, it appears that 100 lbs. of hay is equal to 426 lbs. wheat straw, and that 22 lbs. of oilcake is equal to 100 lbs. of hay, 68 lbs. of oats, 58 lbs. of bran, &c. &c. Boussingault found that his 17 horses, averaging 1,070 lbs. in weight, eat and did well on a ration of 33 lbs. hay per day, working eight hours regularly every day. To obtain the same amount of nutritious food in straw, a horse must eat 165 lbs. of straw per day—a feat he is incapable of performing; but if we give him 30 lbs. of

straw, equal to 6 lbs. of hay; 5 lbs. oilcake, equal to 22 lbs. of hay; and 3 lbs. corn meal, equal to 5 lbs. hay; he will receive the same amount of nutritious elements, and in about the same bulk, while the cost of wintering him in this way would be considerably reduced.

By carefully studying the price of substances used as food, and their relative value, most farmers may save considerable expense in keeping their animals, not by stinting them, (no farmer can afford that,) but by using that food which contains the most nutriment for a given cost.

REMARKS.—We copy the above excellent and seasonable article from the *Genesee Farmer*, published at Rochester, N. Y., and upon which we take the liberty of making an occasional remark. The article is worthy of careful perusal.

(a.) According to our observation, the idea that animals require food in proportion to their weight, is not correct; it may be so as a "general rule," but the exceptions are numerous. Side by side, we have cows, where the lighter ones have for several years consumed more food than those heavier, although all are fed upon the same kind of food. A horse under the same roof weighing between eleven and twelve hundred pounds kept fat upon a less quantity of food than one weighing about nine hundred. Lean and light men we believe, as a general rule, eat more meat than those who are fleshy, whether they require it or not.

(b.) The word *nitrogen* has so much importance in this article that it may not be improper to say something of its properties and relations. Nitrogen composes about 80 per cent. of the atmosphere, and is widely diffused throughout nature. It is that element to which may be attributed the chief enriching quality in manure, and is the basis of the production of ammonia. Manures will be found rich, in proportion to their quantity of nitrogen, or their power of forming nitrates. It is destitute of color, taste or odor, and is a little lighter than common air; absorbs water in very small quantities. Nitrogen forms an important part in the growth of both animals and plants. It is abundant in the sap of young plants, and fixes itself, as the plant approaches maturity, in greatest abundance in the green leaves and in the seeds.

(c.) These articles would be somewhat higher in New England. For instance, oilcake is selling at \$27.00 the ton; southern corn at 80 cents, and the shorts, &c., in proportion.

APPLES.—The apples left with us by Mr. J. HARRINGTON, from the garden of Mr. ADOLPHUS DURANT, of Lawrence, resemble Longville's Kernel, which were introduced into our orchards from the garden of the London Horticultural Society. It is a fair autumn apple, but not better than many well-known varieties now in common cultivation.

For the New England Farmer.

DR. LEE.

EDITORS OF NEW ENGLAND FARMER:—I am not a little surprised, by the strictures in your paper of this morning, upon my communication in relation to the Agricultural Fair at Pittsfield, on the 6th and 7th of Oct. last.

I spoke of the "disappointment" experienced in not having the expected address from Dr. LEE, of Washington;—and I meant to say, that this disappointment was proportioned to the high reputation of this gentleman, for scientific knowledge of agricultural subjects, and in no manner to charge him with any fault for not being present. I only knew, that his presence was *expected*, and *waited* for, until 2 o'clock, P. M.

Dr. LEE entirely misapprehended what I said about "*gentlemen farmers*,"—when he charges me with intimating that any class of farmers are *not gentlemen*. I used the term *gentlemen farmers* in that popular sense, which embraces those who have book knowledge *only* without practical experience;—and not as impairing their character in the least, as gentlemen in the ordinary sense of the term. One moment's reflection, by a man of Dr. L.'s intelligence, must have satisfied him of this.

In speaking of Dr. L., I used the term *scientific*, because I have been accustomed to look upon his communications as more thoroughly scientific than any others I meet—comprehending knowledge obtained from *practice* as well as *books*—this being the only knowledge of value on agricultural topics. I will not say, that a man cannot acquire much knowledge of chemistry, geology &c. &c., in his library, and thereby inform himself most perfectly in the analysis of soils—but I will say, that something beyond this is necessary to make him a complete farmer, or to enable him to teach others to be such.

It has become so common of late, in selecting speakers for public occasions, to look for those who have acquired a *far-famed reputation*, that modest, unassuming men stand no chance. I intended to communicate the idea, that these town and county meetings are fit occasions for such men to be brought forward to try their skill;—and that men of eminence will always find opportunities enough to show off, and hearers enough to listen, without any special appointment.

Far be it from me to place Dr. LEE in a *wrong position* before the public, or to give him any just cause of offence. No man could have regretted his misapprehension of his engagement with the President of the Berkshire Society more than I did; as no one could have been more anxious to hear his instructions. I travelled more than *one hundred miles*, almost expressly for this purpose. That the Dr. may long live and continue to do good, with all his might, is the worst wish I have for him; and that he will heed the maxim, "*think twice before he speaks once*," is the best advice I can give him.

Nov. 6th, 1852.

DARTMOUTH COLLEGE.—We have received the catalogue of this College for 1852-3, illustrated with a beautiful engraving of the college buildings. The Medical students are in number fifty-two; Undergraduates, two hundred and twenty-five, and

those of the Scientific School seventeen, making a total of two hundred and ninety-four. Among the names we notice many from this State, from Maine, New York, Rhode Island, Washington, D. C., and the southern States, as well as from New Hampshire. The institution appears to be in a flourishing condition. We are probably indebted to OLIVER P. HUBBARD, M. D., for the copy received.

A CHEAP, HOME-MADE TELESCOPE.

EDS. RURAL:—In the autumn of '42, being then nineteen years of age, and naturally of a mechanical turn of mind, and having read some in different works on philosophy and astronomy, I undertook to make a cheap telescope; and, as a knowledge of the process may not be uninteresting to all your readers, I give it for what it is worth. I bought a common convex spectacle glass of three feet focus, and a small glass one-half an inch in diameter, one inch focus, both costing 75 cents.

I then proceeded to make a tube as follows: I took a piece of two inch plank, sawed it out two inches square, put it in my lathe, and merely rounded one end, but the other end I diminished to about one and one-fourth inches. I then applied it to a fine circular saw, splitting it in two halves. Then I hollowed out each part, leaving them about one-fourth of an inch thick, and painted the inside black, with lamp-black and spirits of turpentine. I then fastened them firmly together with glue, and made another tube in the same manner about four inches long, small enough to slide closely into the large tube.

I placed the largest glass in the large end of the long tube, and the small one in the small tube near the end, then by sliding the small tube into the large one so as to bring the glasses about three feet and one inch apart, (the sum of their focal distances,) and applying my eye to the small tube, I was astonished and delighted at the clearness with which I could discern distant objects. I placed it upon a sort of standard, in such a manner that it would turn in any direction, and I could then view the planets with great facility. It is true, all terrestrial objects appeared inverted, but the eye soon became accustomed to it, and the clearness compensated for the absence of the other two glasses. On pointing it at Jupiter, I could plainly distinguish his moons but not his belts.—Saturn's rings can be seen with it, but not his moons. Venus appears like a small moon through it, presenting the different phases of that luminary. But the rocky and mountainous portions of our moon present the greatest field for observation, being the nearer celestial objects, and though I have since looked through better telescopes, there is not that difference which one would naturally suppose between a telescope costing \$2, and one costing \$200. Venus being now morning star, and in the best part of her orbit for observation, presents a beautiful appearance.

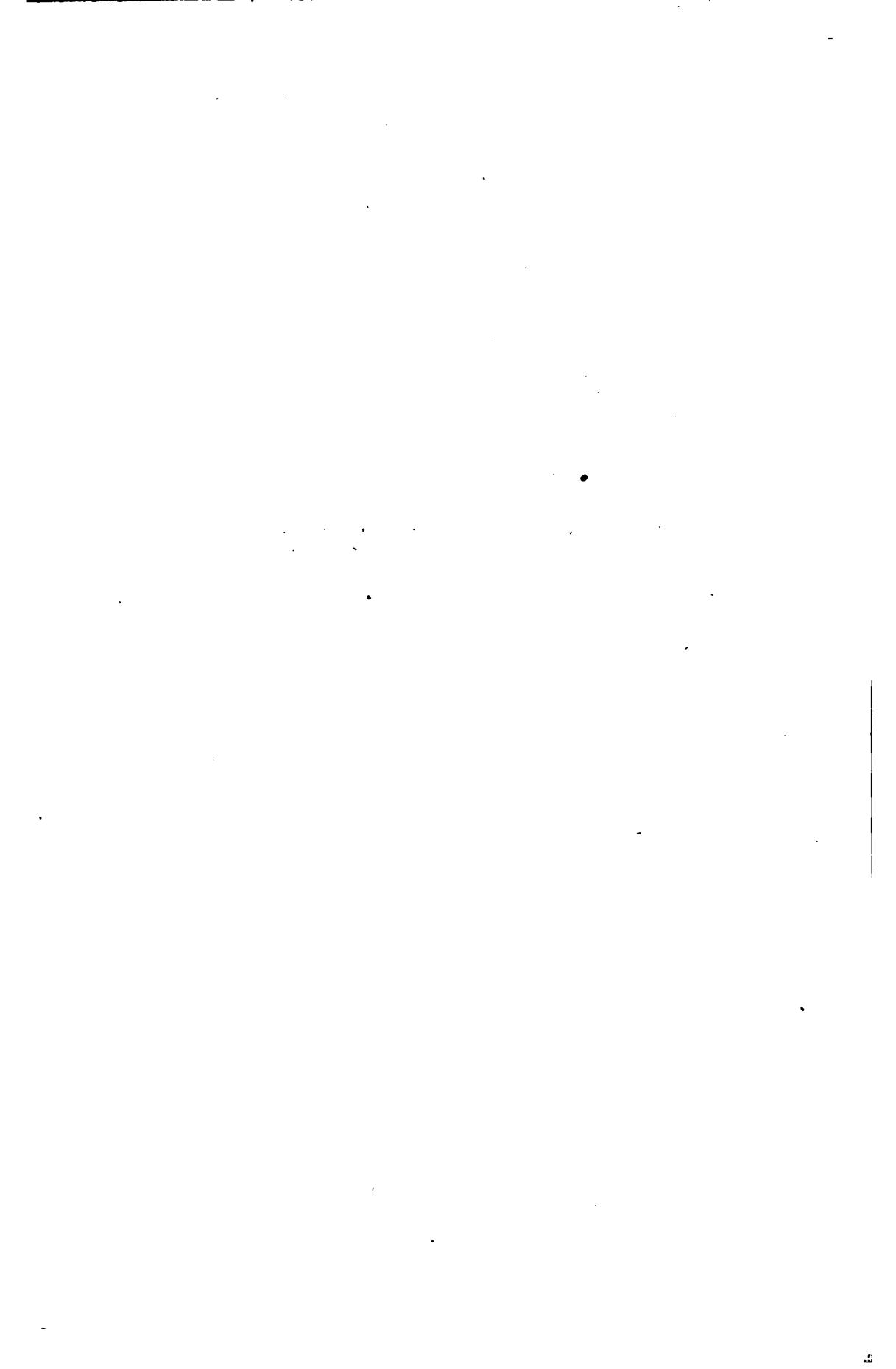
But I will close, merely saying, that such sketches have always been of interest to me, and thinking that others of your readers might have similar phrenological "bumps," I submit it to you to lay before them or not as you think proper.—R. C. NORTON, Guilford, Chenango Co., N. Y., 1852.—*Rural New-Yorker*.

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